

10/649547 :

STIC text  
search

FILE 'CAPLUS' ENTERED AT 16:34:15 ON 31 AUG 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Aug 2005 VOL 143 ISS 10  
FILE LAST UPDATED: 30 Aug 2005 (20050830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L1 47039 SEA FILE=CAPLUS ABB=ON PLU=ON (GENE OR DEOXYRIBONUCLEIC OR DNA OR DEOXY RIBONUCLEIC OR NUCLEIC) (S) (TRANSFER OR TRANSFERRED OR TRANSFERRING)  
L2 119 SEA FILE=CAPLUS ABB=ON PLU=ON (L1 OR TRANSGENET? OR TRANSGENESIS?) AND PRO!ARYOT?(S) CELL  
L3 38 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND VECTOR  
L4 10 SEA FILE=CAPLUS ABB=ON PLU=ON L3 AND (REPLICAT? OR REPLICON)

L4 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 08 Sep 2002

ACCESSION NUMBER: 2002:676211 CAPLUS

DOCUMENT NUMBER: 137:211898

TITLE: Recombinational cloning using engineered recombination sites and rolling circle replication

INVENTOR(S): Carstens, Carsten-Peter

PATENT ASSIGNEE(S): Stratagene, USA

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002068670	A1	20020906	WO 2002-US4454	20020215
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 6696278	B1	20040224	US 2001-793372	20010226
EP 1373544	A1	20040102	EP 2002-713596	20020215
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

Searcher : Shears 571-272-2528

10/649547

US 2004180443 A1 20040916 US 2003-649547 20030827  
PRIORITY APPLN. INFO.: US 2001-793372 A 20010226  
WO 2002-US4454 W 20020215

AB The present invention provides a method of **transfer** of a **gene** of interest from a first **vector** to a product **vector** comprising contacting a first and second **vector** in vitro with a site-specific recombinase so as to generate a co-integrate **vector** comprising the components of the first and second **vector**, and introducing the co-integrate **vector** to a **prokaryotic** host **cell** so as to generate a product **vector** by rolling circle **replication**, comprising the **gene** of interest. Transfer of inserts of interest from a first **vector** to a product **vector** is a two step process. The first step is the formation of a fused, co-integrate **vector** between the first **vector** and a second **vector**. The second step is the in vivo rescue of the product **vector** containing the insert of interest in the second **vector** using the Double strand origin of **replication** of a rolling circle **replicon**. Due to potential problems arising for the coexistence of the co-integrate **vector** and the rescued product **vector** in the same host cell, an addnl. step of transferring the product into a secondary host prior to selection is required. In order to test the feasibility of insert transfer by the above method, a first **vector** containing a LoxP site and a 46 bp fragment containing the filamentous bacteriophage f1 double strand origin of **replication** flanking the insert of interest was constructed (Figure 3). The **vector** is based on a colE1 (pUC) **replicon** and confers ampicillin resistance. It does not contain a single strand origin or a packaging signal for packaging by f1 helper phages. As a test insert the,8-galactosidase gene of pCH1 10 was inserted between the LoxP site and the f1-DS origin since its presence can be easily monitored by the appearance of blue colonies in the presence of the chromogenic substrate X-gal.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN  
ED Entered STN: 24 May 2002  
ACCESSION NUMBER: 2002:391850 CAPLUS  
DOCUMENT NUMBER: 136:396972  
TITLE: Construction of binary BAC (bacterial artificial chromosome) **vector** and uses for expressing heterologous DNA in non-plant cells  
INVENTOR(S): Hanson, Maureen R.; Hamilton, Carol  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., USA  
SOURCE: PCT Int. Appl., 28 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002040641	A2	20020523	WO 2001-US45327	20011019

Searcher : Shears 571-272-2528

WO 2002040641                      A3                      20030918

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
 TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR,  
 GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002123100                      A1                      20020905                      US 2001-976687                      20011012

AU 2002039426                      A5                      20020527                      AU 2002-39426                      20011019

PRIORITY APPLN. INFO.:                      US 2000-241688P                      P                      20001019

US 2001-976687                      A                      20011012

WO 2001-US45327                      W                      20011019

AB The present invention provides a binary BAC (bacterial artificial chromosome) **vector** system for **transferring** and expressing heterologous DNA in a non-plant host cell. The **vector** used in this method includes a backbone having a first origin of **replication** capable of maintaining heterologous DNA as a single copy in an Escherichia coli host cell. The **vector** further includes a unique restriction endonuclease cleavage site for insertion of heterologous DNA, and left and right Agrobacterium T-DNA border sequences flanking the unique restriction endonuclease cleavage site. In certain host cells, the T-DNA border sequences allow introduction of heterologous DNA located between the left and right T-DNA border sequences into a host cell. In preferred embodiments, the **vector** includes a second origin of **replication** capable of maintaining heterologous DNA as a single copy in a host cell such as Agrobacterium species or other **prokaryotic cells**.

L4 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 25 Apr 2000

ACCESSION NUMBER: 2000:266771 CAPLUS

DOCUMENT NUMBER: 133:247767

TITLE: **Gene transfer** from bacteria to mammalian cells

AUTHOR(S): Courvalin, Patrice; Goussard, Sylvie; Grillot-Courvalin, Catherine

CORPORATE SOURCE: Unite des Agents Antibacteriens, Institut Pasteur, CNRS EP J0058, Paris, 75724, Fr.

SOURCE: Horizontal Gene Transfer, [Fallen Leaf Lake Conference on Horizontal Gene Transfer], Fallen Leaf Lake, Calif., Sept. 12-15, 1996 (1998), Meeting Date 1996, 107-117. Editor(s): Syvanen, Michael; Kado, Clarence I. Chapman & Hall: London, UK.  
 CODEN: 68VNA4

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Transfer of genetic information between phylogenetically remote bacterial genera (Trieu-Cuot et al., 1987), from bacteria to yeast (Heinemann and Sprague, 1989), and from bacteria to plants (Buchanan-Wollaston et al., 1987) by plasmid conjugation has been

described. However, direct **DNA transfer** from **prokaryotes** to mammalian **cells** has not yet been demonstrated. Certain bacterial species have evolved the ability to enter mammalian cells by inducing their own internalization (Falkow, 1991). The authors show that invasive strains of *Shigella flexneri* and *Escherichia coli*, that undergo lysis upon entry into mammalian cells because of impaired cell wall synthesis, can act as stable DNA delivery systems to their host. This direct **gene transfer** is efficient and of broad host cell range and the **replicative** or integrative **vectors** so delivered are stably inherited and expressed by the cell progeny. DNA delivery by abortive invasion of eukaryotic cells by bacteria is of potential interest for stimulation of mucosal immunity and for in vivo or ex vivo gene therapy of human diseases.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 28 Mar 1998

ACCESSION NUMBER: 1998:183857 CAPLUS

DOCUMENT NUMBER: 128:266937

TITLE: Genetic transformation of eukaryotic organelle with conjugative **vectors** for prokaryote-eukaryote **gene transfer**

INVENTOR(S): Yoshida, Kazuo; Tomioka, Noboru

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10075793	A2	19980324	JP 1996-255378	19960906
PRIORITY APPLN. INFO.:			JP 1996-255378	19960906

AB Disclosed is a method for introducing gene from prokaryotes (e.g. *Escherichia coli*) into organelle (e.g. mitochondria or chloroplast) of eukaryotes (e.g. *Saccharomyces cerevisiae*), by using genes **oriV**, **oriT**, **mob**, and an origin of **replication** functional in eukaryotic organelle. As a mitochondrial marker, **cat** (chloramphenicol acetyltransferase gene) was modified into **CATM** to adapt for mitochondrial codon by site-directed mutagenesis. For mitochondrial transformation in *Saccharomyces cerevisiae*, a novel conjugative plasmid, **pAY-CATM** which contains **oriV**, **oriT**, **mob**, **2 $\mu$ m-ori**, **URA3**, and **CATM** gene was prepared. *E. coli* donor harboring **pAY-CATM** in the presence of **tra gene** on a helper plasmid **pRH220** (also harbored in *E. coli*) was successfully **transferred** into mitochondria of *S. cerevisiae* recipient via tri-parental mating at the rate of  $3.3 \times 10^{-5}$  per recipient. The method may be developed for the transformation into plant or animal cells for correcting defective mitochondrial functions.

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 21 Feb 1996

10/649547

ACCESSION NUMBER: 1996:106940 CAPLUS  
DOCUMENT NUMBER: 124:195206  
TITLE: **Gene transfer** from bacteria to mammalian cells  
AUTHOR(S): Courvalin, Patrice; Goussard, Sylvie; Grillot-Courvalin, Catherine  
CORPORATE SOURCE: CNRS, Institut Pasteur, Paris, 75724/15, Fr.  
SOURCE: Comptes Rendus de l'Academie des Sciences, Serie III: Sciences de la Vie (1995), 318(12), 1207-12  
CODEN: CRASEV; ISSN: 0764-4469  
PUBLISHER: Libbey Eurotext  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Transfer of genetic information between phylogenetically remote bacterial genera, from bacteria to yeast, and from bacteria to plants by plasmid conjugation has been described. However, direct **DNA transfer** from **prokaryotes** to mammalian **cells** has not yet been demonstrated. Certain bacterial species have evolved the ability to enter mammalian cells by inducing their own internalization. We show that invasive strains of *Shigella flexneri* and *Escherichia coli*, that undergo lysis upon entry into mammalian cells because of impaired cell wall synthesis, can act as stable DNA delivery systems to their host. This direct **gene transfer** is efficient, of broad host cell range and the **replicative** or integrative **vectors** so delivered are stably inherited and expressed by the cell progeny. DNA delivery by abortive invasion of eukaryotic cells by bacteria is of potential interest for stimulation of mucosal immunity and for in vivo or ex vivo gene therapy of human diseases.

L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN  
ED Entered STN: 25 Nov 1989  
ACCESSION NUMBER: 1989:588731 CAPLUS  
DOCUMENT NUMBER: 111:188731  
TITLE: Efficient **transfer** of the complete human beta-globin **gene** into human and mouse hemopoietic cells via SV40 pseudovirions  
AUTHOR(S): Dalyot, Nava; Oppenheim, Ariella  
CORPORATE SOURCE: Dep. Hematol., Hadassah Univ. Hosp., Jerusalem, 91120, Israel  
SOURCE: UCLA Symposia on Molecular and Cellular Biology, New Series (1989), 87(Gene Transfer Gene Ther.), 47-56  
CODEN: USMBD6; ISSN: 0735-9543  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The complete human  $\beta$ -globin gene was cloned into a plasmid **vector** that carried the SV40 origin of **replication**. After removing the **prokaryotic** sequences, the plasmid was encapsidated as an SV40 pseudovirion and transmitted into cultured mouse (MEL) and human (K562) hemopoietic **cells** by viral infection. A high level of nonintegrated copies of the transmitted  $\beta$ -globin gene was detected in Hirt supernatants of the infected cells after 48 h.

L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN  
ED Entered STN: 17 Sep 1988  
ACCESSION NUMBER: 1988:489344 CAPLUS  
DOCUMENT NUMBER: 109:89344

Searcher : Shears 571-272-2528

TITLE: Rapid mutation testing system for human cells  
 INVENTOR(S): Calos, Michele P.  
 PATENT ASSIGNEE(S): Leland Stanford Junior University, USA  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4753874	A	19880628	US 1985-753007	19850708
PRIORITY APPLN. INFO.:			US 1985-753007	19850708

AB A rapid and simple system for determining the mutagenicity of an agent comprises exposure of a **prokaryote**-eukaryote shuttle **vector** to the mutagen in a mammalian **cell** then **transferring the vector to a prokaryote** and screening for mutations in a reporter **gene**. Human cell line 293 (a human embryonic kidney line transformed with adenovirus-5) was transfected with pJYMib, which contains all of SV40, pML (a pBR322 derivative), the lacI gene, and the amino terminal portion of lacZ. The cell were exposed to UV light 48 h after transfection. Plasmid DNA was prepared from the irradiated cells and E. coli MC1061 (recA-) was transformed with it. I- colonies were scored as blue colonies on plates containing X-gal. The dose response curve over a range of 0-70 J/m<sup>2</sup> of UV light was roughly linear and resulted in an approx. 4-fold increase in I- frequency. Operation of this lacI shuttle without external mutagenesis resulted in a spontaneous I- frequency of 3.5 + 10<sup>-4</sup>, a rate substantially below the mutation frequencies reported for shuttle **vectors** in other types of mammalian cells.

L4 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 23 Jun 1984

ACCESSION NUMBER: 1984:204500 CAPLUS

DOCUMENT NUMBER: 100:204500

TITLE: New cosmid **vectors** developed for eukaryotic DNA cloning

AUTHOR(S): Brady, Ged; Jantzen, Hans M.; Bernard, Hans U.; Brown, Robert; Schuetz, Guenter; Hashimoto-Gotoh, Tamotsu

CORPORATE SOURCE: Inst. Cell Tumor Biol., German Cancer Res. Cent., Heidelberg, D-6900, Fed. Rep. Ger.

SOURCE: Gene (1984), 27(2), 223-32  
 CODEN: GENED6; ISSN: 0378-1119

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A series of ColE1 and pSC101 cosmid **vectors** were constructed which are suitable for cloning large stretches of DNA. All contain a single BamHI site allowing cloning of Sau3A, MboI, BglII, and BamHI-generated fragments. These **vectors** have the following characteristics: (1) they are relatively small (1.7-3.4 kilobases); (2) the BamHI cloning site is flanked by restriction enzyme sites enabling direct cloning of unfractionated insert **DNA** without generating multiple insert or **vector** ligation products; (3) 2 **vectors** (pHSG272 and pHSG274) contain a hybrid Tn5 KmR G418R **gene** which is selectable in both **prokaryotic**

and eukaryotic **cells**, making them suitable for **transferring DNA** into eukaryotic **cells**, and (4) the different **prokaryotic** selectable markers available in the other **vectors** described facilitate cosmid rescue of the **transferred DNA** sequences from the eukaryotic **cell**: CmR, ApR, KmR, (pHSG429), CmR, (pHSG439), colicin E1 immunity (pHSG250); (5) the cosmid pHSG272 was used successfully to construct a shuttle **vector** that is based on the bovine papilloma virus **replicon**.

L4 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 26 May 1984

ACCESSION NUMBER: 1984:172419 CAPLUS

DOCUMENT NUMBER: 100:172419

TITLE: Microinjected pBR322 stimulates cellular DNA synthesis in Swiss 3T3 cells

AUTHOR(S): Hyland, Julia K.; Hirschhorn, Ricky R.; Avignolo, Carlo; Mercer, W. Edward; Ohta, Michio; Galanti, Norbel; Jonak, Gerald J.; Baserga, Renato

CORPORATE SOURCE: Sch. Med., Temple Univ., Philadelphia, PA, 19140, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1984), 81(2), 400-4  
CODEN: PNASA6; ISSN: 0027-8424

DOCUMENT TYPE: Journal

LANGUAGE: English

AB When pBR322 is manually microinjected into the nuclei of quiescent Swiss 3T3 cells it stimulates the incorporation of [3H]thymidine into DNA. This increased incorporation that is detected by in situ autoradiog. in microinjected cells represents cellular DNA synthesis and not DNA repair or plasmid **replication**. The effect is due to pBR322 and not due to impurities, mech. perturbations due to the microinjection technique, or nonspecific effects. This stimulation is striking in Swiss 3T3 cells. Some NIH 3T3 cells show a slight stimulation, but hamster cells, derived from baby hamster kidney (BHK) cells, are not stimulated when microinjected with pBR322. The preliminary evidence seems to indicate that the integrity of the pBR322 genome is important for the stimulation of cellular DNA synthesis in quiescent Swiss 3T3 cells. These results, although of a preliminary nature, are of interest because they indicate that a **prokaryotic** genome may alter the **cell** cycle of mammalian **cells**. From a practical point of view the stimulatory effect of microinjected pBR322 on cellular **DNA** synthesis has a more immediate interest, because pBR322 is the **vector** most commonly used for mol. cloning and 3T3 cells are very frequently used for **gene transfer** expts.

L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 12 May 1984

ACCESSION NUMBER: 1984:151877 CAPLUS

DOCUMENT NUMBER: 100:151877

TITLE: Direct selection of *Saccharomyces cerevisiae* resistant to the antibiotic G418 following transformation with a DNA **vector**

AUTHOR(S): Webster, Thomas D.; Dickson, Robert C.

CORPORATE SOURCE: Coll. Med., Univ. Kentucky, Lexington, KY, 40536-00840, USA

SOURCE: Gene (1983), 26(2-3), 243-52

CODEN: GENED6; ISSN: 0378-1119  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A new procedure was developed for selecting yeast transformants without the need for complementing auxotrophic markers. The procedure is based on resistance to antibiotic G418 [49863-47-0] imparted to transformants by recombinant DNA **vectors**. Several *Escherichia coli*-yeast shuttle **vectors** containing the kanamycin [8063-07-8] (G418)-resistance gene of Tn903, plus several yeast genes making dual selections possible were constructed. The efficiency for selecting G418-resistant transformants was dependent upon several factors including the composition of the growth medium and the time at which G418 selective pressure was administered. Media which contained levels of salts found in yeast N base rendered cells partially to completely resistant to G418 and could not be used for selecting G418-resistant transformants. On the other hand, untransformed cells remained sensitive to G418 when grown on YEPD medium thus allowing selection of G418-resistant transformants. A lag phase of 12-18 h, following growth at 30°, was required prior to administration of G418 to achieve maximum transformation frequency. Transformation frequencies ranged 100-700/μg of DNA and varied with the **vector** and strain used. The kanamycin gene imparted resistance to G418 in either the episomally or chromosomally integrated state. The gene was highly stable in the integrated state, even without selective pressure. The utility of the procedure was demonstrated by selecting transformants of 4 different strains of *S. cerevisiae* and by cloning autonomous **replication** sequences (ARS) from the yeast *Kluyveromyces lactis*. This or related procedures could be used to develop transformation systems for many eukaryotic and **prokaryotic cells** for which no transformation procedure is available.

FILE 'MEDLINE' ENTERED AT 16:34:16 ON 31 AUG 2005

FILE 'BIOSIS' ENTERED AT 16:34:16 ON 31 AUG 2005  
Copyright (c) 2005 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 16:34:16 ON 31 AUG 2005  
COPYRIGHT (C) 2005 Elsevier Inc. All rights reserved.

FILE 'WPIDS' ENTERED AT 16:34:16 ON 31 AUG 2005  
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE 'CONFSCI' ENTERED AT 16:34:16 ON 31 AUG 2005  
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'SCISEARCH' ENTERED AT 16:34:16 ON 31 AUG 2005  
Copyright (c) 2005 The Thomson Corporation

FILE 'JICST-EPLUS' ENTERED AT 16:34:16 ON 31 AUG 2005  
COPYRIGHT (C) 2005 Japan Science and Technology Agency (JST)

FILE 'JAPIO' ENTERED AT 16:34:16 ON 31 AUG 2005  
COPYRIGHT (C) 2005 Japanese Patent Office (JPO)- JAPIO

L5 52 S L4  
L6 43 DUP REM L5 (9 DUPLICATES REMOVED)

L6 ANSWER 1 OF 43 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

STN  
 ACCESSION NUMBER: 2004:175566 BIOSIS  
 DOCUMENT NUMBER: PREV200400177635  
 TITLE: Method for **transfer** of DNA segments.  
 AUTHOR(S): Carstens, Carsten-Peter [Inventor, Reprint Author]  
 CORPORATE SOURCE: LaJolla, CA, USA  
 ASSIGNEE: Stratagene  
 PATENT INFORMATION: US 6696278 20040224  
 SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Feb 24 2004) Vol. 1279, No. 4. <http://www.uspto.gov/web/menu/patdata.html>. e-file. ISSN: 0098-1133 (ISSN print).  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 31 Mar 2004  
 Last Updated on STN: 31 Mar 2004

Parent

AB The present invention provides a method of **transfer** of a **gene** of interest from a first **vector** to a product **vector** comprising contacting a first and second **vector** in vitro with a site-specific recombinase so as to generate a co-integrate **vector** comprising the components of the first and second **vector**, and introducing the co-integrate **vector** to a **prokaryotic** host **cell** so as to generate a product **vector** by rolling circle **replication**, comprising the **gene** of interest.

L6 ANSWER 2 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2005-074838 [08] WPIDS  
 DOC. NO. CPI: C2005-025702  
 TITLE: Preparing circular closed expression constructs of double-stranded DNA, useful in gene therapy, comprises deleting, from an amplifiable plasmid, all non-essential control sequences.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): SCHROFF, M; SMITH, C  
 PATENT ASSIGNEE(S): (MOLO-N) MOLOGEN AG  
 COUNTRY COUNT: 103  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2004111247	A1	20041223	(200508)*	GE	31
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
AU 2003246536	A1	20050104	(200517)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004111247	A1	WO 2003-DE1970	20030610
AU 2003246536	A1	AU 2003-246536	20030610
		WO 2003-DE1970	20030610

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003246536	A1 Based on	WO 2004111247

PRIORITY APPLN. INFO: WO 2003-DE1970 20030610

AN 2005-074838 [08] WPIDS

AB WO2004111247 A UPAB: 20050202

NOVELTY - Preparing a circular, annular, closed expression construct (A) from a DNA double strand.

DETAILED DESCRIPTION - Preparing a circular, annular, closed expression construct (A) from a DNA double strand comprises:

(1) cutting a double-stranded DNA sequence out from a biologically amplifiable plasmid, by first digestion with a restriction enzyme (RE), where the cleavage sites border an expression cassette (EC) consisting of at least one each of promoter, coding and polyadenylation sequences, linked directly without intervening bases;

(2) intramolecular ligation of the resulting restriction fragment to generate a covalently closed DNA double strand (ring);

(3) second digestion with an RE that recognizes, and cuts, at a site that is not present in the construct being prepared but is present, at least once, in the remainder of the plasmid;

(4) simultaneously, or subsequently, degrading the open-chain residue of the plasmid with an exonuclease specific for 3'- and 5'-DNA ends; and

(5) purifying the closed expression cassette.

INDEPENDENT CLAIMS are also included for:

(1) similar method in which the intermolecular ligation is done in presence of at least one oligodeoxynucleotide (ON) to which a ligand is bound covalently (by chemical modification), so that the ring formed includes ON; and

(2) expression construct (A) for transport of genetic information.

USE - (A) are used to transport genetic information for gene therapy in humans or animals, especially as vaccines, also as components of kits (claimed).

ADVANTAGE - (A) provide high **transfer** and expression efficiencies; avoid problems associated with viral expression systems; and allow targeted transfection of **cells**. They contain only absolutely essential control elements (so size can be reduced to 2-3 kb, with a 90% reduction in CpG content); can not be **replicated** in **prokaryotic** or eukaryotic **cells**; and, since they lack viral and bacterial sequences such as marker **genes**, they are safer, with no induction of immunological or inflammatory processes. Mice were given 5 intratumoral injections of:

(a) linear **vector**;

(b) **vector** of (a) linked to a nuclear localization peptide (NLP); or

(c) new circular **vector** linked to the same NLP, all expressing Lac-Z. 48 hours after the last injection, the tumors were removed; homogenized and the lysate analyzed for Lac-Z content.

This was (pg/mg of protein) about 300 for (a); 350 for (b) and 1000 for (c).

Dwg.0/6

10/649547

ACCESSION NUMBER: 2004-307292 [29] WPIDS  
 DOC. NO. CPI: C2004-116640  
 TITLE: Recombinant adenovirus with specific genomic deletion, useful as expression or **gene transfer vector**, e.g. for **gene** therapy, can **replicate** but does not form infectious particles.  
 DERWENT CLASS: B04 C06 D16  
 INVENTOR(S): ELOIT, M; KLONJKOWSKI, B  
 PATENT ASSIGNEE(S): (ENVA-N) ENVA ECOLE NAT VETERINAIRE ALFORT; (INRG) INRA INST NAT RECH AGRONOMIQUE  
 COUNTRY COUNT: 107  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2845395	A1	20040409	(200429)*		44
WO 2004033696	A2	20040422	(200429)	FR	
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW					
AU 2003283504	A1	20040504	(200465)		
EP 1549751	A2	20050706	(200544)	FR	
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2845395	A1	FR 2002-12472	20021008
WO 2004033696	A2	WO 2003-FR2964	20031008
AU 2003283504	A1	AU 2003-283504	20031008
EP 1549751	A2	EP 2003-775478	20031008
		WO 2003-FR2964	20031008

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003283504	A1 Based on	WO 2004033696
EP 1549751	A2 Based on	WO 2004033696

PRIORITY APPLN. INFO: FR 2002-12472 20021008

AN 2004-307292 [29] WPIDS

AB FR 2845395 A UPAB: 20040505

NOVELTY - A recombinant adenovirus (A) produced from a **replicative** adenovirus (A') by deleting at least part of the genome corresponding to positions 311-499 in the genome of canine type 2 adenovirus (Cav2; GenBank J04368), including at least part of 311-401, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (1) nucleic acid molecule (I) that is either the genome of (A) or a fragment of it;
- (2) plasmid that contains (I); and

(3) preparing a recombinant adenovirus by homologous intermolecular recombination in a **prokaryotic cell**

ACTIVITY - Cytostatic; Virucide.

MECHANISM OF ACTION - Gene Therapy; Vaccine.

When a recombinant canine adenovirus in which the 311-439 genomic region had been replaced by the sequence for enhanced green fluorescent protein (eGFP) was used for intramuscular immunization of a cat, antibodies against eGFP were induced by a single injection.

USE - (A) are useful as expression or **gene transfer vectors**, especially as therapeutic agents for **gene** therapy (e.g. expression of erythropoietin); treatment of cancer (expression of interleukins or interferon) or as immunogenic/vaccinating compositions (e.g. expression of feline immune deficiency virus proteins), for use in human or veterinary medicine; also for production of recombinant proteins.

ADVANTAGE - Deleting the specified region does not interfere with **replication** in permissive cells, but does render the virus incapable of multiplication, i.e. it can not produce infectious particles so can not disseminate in the environment.  
Dwg.0/6

L6 ANSWER 4 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2003-833536 [77] WPIDS  
DOC. NO. CPI: C2003-234508  
TITLE: New **vector** comprising a **nucleic acid**, an E. coli and Actinomycetes origin of **replication**, a cos cosmid cloning site, and an origin of **transfer**, useful for expressing polypeptides and for manipulating Actinomycetes biosynthesis **genes**.  
DERWENT CLASS: B04 D16  
INVENTOR(S): MAGARVEY, N  
PATENT ASSIGNEE(S): (AMHP) WYETH  
COUNTRY COUNT: 102  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003083087	A1	20031009	(200377)*	EN	34
RW:	AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE				
	LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				
W:	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE				
	DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG				
	KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM				
	PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ				
	VC VN YU ZA ZM ZW				
US 2003224484	A1	20031204	(200380)		
AU 2003224802	A1	20031013	(200435)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003083087	A1	WO 2003-US9661	20030328
US 2003224484	A1 Provisional	US 2002-368712P	20020329
		US 2003-402841	20030328
AU 2003224802	A1	AU 2003-224802	20030328

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003224802	A1 Based on	WO 2003083087

PRIORITY APPLN. INFO: US 2002-368712P 20020329; US  
2003-402841 20030328

AN 2003-833536 [77] WPIDS

AB WO2003083087 A UPAB: 20031128

NOVELTY - A **vector** comprising a **nucleic acid** encoding a polypeptide, where the **nucleic acid** is operatively associated with an expression control sequence, an *Escherichia coli* origin of **replication**, an *Actinomycetes* origin of **replication**, a *cos* cosmid cloning site, and an origin of **transfer**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a host cell genetically engineered to contain the **vector**; and

(2) expressing a polypeptide in a **prokaryotic cell** comprising:

(a) culturing a first **prokaryotic cell** comprising the **vector**;

(b) allowing direct transfer of the **vector** from the first **prokaryotic cell** to the second

**prokaryotic cell**, where the direct transfer occurs by conjugation; and

(c) expressing the protein in the second **prokaryotic cell**.

USE - The **vector** is useful for expressing a polypeptide in **prokaryotic cells**, for manipulating *Actinomycetes* biosynthesis genes, and for producing specific modification with a protein sequence to determine the effect of such modification, e.g. evaluation of the biological activity of the protein, and manipulation of a synthetic pathway to alter final product from bacteria.

Dwg.0/3

L6 ANSWER 5 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2003-679497 [64] WPIDS

DOC. NO. CPI: C2003-185636

TITLE: Moving an insert nucleic acid between **vectors** using site-specific recombination in vivo, useful for studying the biology of the organism, including array construction, reporter gene fusions, mutagenesis and protein production.

DERWENT CLASS: B04 D16

INVENTOR(S): HOUSE, B L; KAHN, M L; MORTIMER, M W

PATENT ASSIGNEE(S): (UNIW) UNIV WASHINGTON STATE RES FOUND

COUNTRY COUNT: 102

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2003064623	A2	20030807	(200364)*	EN	52
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE					
LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE					
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG					

*Not prior*

10/649547

KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM  
PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ  
VC VN YU ZA ZM ZW  
US 2003219902 A1 20031127 (200378)  
AU 2003230549 A1 20030902 (200422)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003064623	A2	WO 2003-US3176	20030131
US 2003219902	A1 Provisional	US 2002-354063P	20020131
		US 2003-357268	20030131
AU 2003230549	A1	AU 2003-230549	20030131

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003230549	A1 Based on	WO 2003064623

PRIORITY APPLN. INFO: US 2002-354063P 20020131; US  
2003-357268 20030131

AN 2003-679497 [64] WPIDS

AB WO2003064623 A UPAB: 20031006

NOVELTY - Moving an insert **nucleic** acid molecule between **vectors** comprises **transferring** an insert **nucleic** acid molecule from a first **vector** to a second **vector** using site-specific recombination in vivo, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) analyzing the function of a genomic sequence in a prokaryotic organism using site-specific recombination in vivo, comprising providing a first **vector** having a **transfer** origin and an insert **nucleic** acid coding molecule flanked by a first recombination site and by a second recombination site, where the insert **nucleic** acid molecule comprises a sequence from a genomic region in a first prokaryotic organism, **transferring** the insert **nucleic** acid molecule within the first **vector** into a second **vector** comprising a **transfer** origin and a first recombination site partner and a second recombination site partner by site-specific recombination in a second prokaryotic organism, **transferring** the second **vector** from the second prokaryotic organism into the first prokaryotic organism by conjugation, and analyzing the function of the genomic region in the first prokaryotic organism;

(2) deleting a target region in a prokaryotic genome by site-specific recombination in vivo, comprising introducing a first and second recombination site into a first and second genomic region, respectively, by homologous recombination, where the first or second genomic region is adjacent to a first or second end of the target genomic region, respectively, and deleting the target genomic region by providing one or more recombination proteins to catalyze site-specific recombination between the first and second recombination sites;

(3) a **DNA vector** comprising a **transfer** origin for conjugation and a selectable marker flanked by a first and second recombination site; and

Searcher : Shears 571-272-2528

(4) a kit comprising one or more **vectors** of (3) and instructions for moving one or more insert nucleic acid molecules from a first **vector** into a second **vector** using site-specific recombination in vivo.

USE - The methods and compositions of the present invention of using site-specific recombination in vivo to move insert nucleic acid molecules between **vectors** are useful for studying the biology of the organism, including array construction, reporter gene fusions, mutagenesis, protein production and characterization.

Dwg.0/4

L6 ANSWER 6 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-829570 [77] WPIDS  
 CROSS REFERENCE: 2000-086973 [07]  
 DOC. NO. CPI: C2003-233659  
 TITLE: Producing a recombinant Mononegavirales virus for preparing a composition for preventing or treating viral diseases by heating the transfected rescue composition to an effective heat shock temperature.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): KOVACS, G R; PARKS, C L; SIDHU, M S; UDEM, S A  
 PATENT ASSIGNEE(S): (AMHP) WYETH  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2003129729	A1	20030710	(200377)*		75

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003129729	A1 Cont of	US 2001-701671	20010228
		US 2002-261961	20021001

PRIORITY APPLN. INFO: US 2001-701671 20010228; US  
 2002-261961 20021001

AN 2003-829570 [77] WPIDS

CR 2000-086973 [07]

AB US2003129729 A UPAB: 20040213

NOVELTY - Producing a recombinant Mononegavirales virus comprising in at least one host cell, conducting transfection, in media, of a rescue composition to permit the co-expression of the **vectors** and the production of the recombinant virus, and heating the transfected rescue composition to an effective heat shock temperature to increase recovery of the recombinant virus, is new.

DETAILED DESCRIPTION - Producing a recombinant Mononegavirales virus comprises:

(a) in at least one host cell, conducting transfection, in media, of a rescue composition to permit the co-expression of the **vectors** and the production of the recombinant virus; and

(b) heating the transfected rescue composition to an effective heat shock temperature to increase recovery of the recombinant virus.

The rescue composition comprises:

(a) a transcription **vector** comprising an isolated nucleic acid, having a sequence encoding a genome of antigenome of a non-segmented negative-sense, single stranded RNA virus of the Order

Mononegavirales; and

(b) an expression **vector** comprising one or more isolated nucleic acid molecules encoding the trans-acting proteins necessary for encapsidation, transcription and **replication**.

An INDEPENDENT CLAIM is also included for a composition comprising the recombinant virus or a carrier.

ACTIVITY - Virucide.

No biological data given.

MECHANISM OF ACTION - Gene therapy; Vaccine.

USE - The method is useful for producing a recombinant Mononegavirales virus for preparing a composition for preventing or treating viral diseases.

Dwg.0/6

L6 ANSWER 7 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-506610 [48] WPIDS  
 DOC. NO. CPI: C2003-135614  
 TITLE: New **vector** for cloning by positive selection of clones containing DNA inserts, comprises a nuclease sequence that kills cells unless inactivated by insertion of a coding sequence.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): GRAUPNER, S  
 PATENT ASSIGNEE(S): (GLBI-N) GL BIOTECH GMBH  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 10160600	A1	20030626	(200348)*		23

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10160600	A1	DE 2001-10160600	20011210

PRIORITY APPLN. INFO: DE 2001-10160600 20011210

AN 2003-506610 [48] WPIDS

AB DE 10160600 A UPAB: 20030729

NOVELTY - A **vector** (A) comprising:

(a) an origin of **replication**;

(b) a regulatory sequence (RS);

(c) a sequence (I) that encodes a nuclease (II) and linked to RS;

and

(d) between RS and the stop codon of (I), at least one restriction cleavage site (RCS) so that it can be cleaved at this site and religated without losing its capacity to encode a functional (II), is new.

DETAILED DESCRIPTION - A **vector** (A) comprising:

(a) an origin of **replication**;

(b) a regulatory sequence (RS);

(c) a sequence (I) that encodes a nuclease (II) and linked to RS;

and

(d) between RS and the stop codon of (I), at least one restriction cleavage site (RCS) so that it can be cleaved at this site and religated without losing its capacity to encode a functional (II), is new.

(II) comprises an N-terminal leader peptide (TLP) and then the sequence encoding TLP is modified so that transport of translated (II) from the cytosol is not possible. Alternatively (II) lacks the TLP.

INDEPENDENT CLAIMS are also included for:

- (1) host cells that contain (A);
- (2) identifying recombinant clones that contain **vectors** with inserted DNA fragments; and
- (3) a kit for performing the method of (2).

USE - (A) is used to identify, select and isolate recombinant clones that contain inserted **DNA** fragments (claimed). A particular application is selective killing of recombinant *Agrobacterium* after these have been used to **transfer T-DNA** to plants, also selective killing of recombinant plant cells that have acquired non-**vector DNA** in addition to T-DNA.

ADVANTAGE - (A) makes possible quick and less laborious selection of recombinant clones. The production of the fusion between (I) and the sequence encoded by the multiple cloning site is confined to the nucleus where it is lethal (by degrading chromosomes), so only cells containing **vectors** where this sequence includes an inserted DNA fragment (preventing expression of functional nuclease) will survive (positive selection).

Dwg.0/2

L6 ANSWER 8 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-120726 [11] WPIDS  
 DOC. NO. CPI: C2003-031297  
 TITLE: New single-chain human antibody fragment, useful for treating or diagnosing hepatitis C virus infection, has affinity for an essential viral protein.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): ARTSAENKO, O; HAUSSLINGER, D; HEINTGES, T; TESSMANN, K; HAEUSSINGER, D; HAEUSSLINGER, D  
 PATENT ASSIGNEE(S): (HEIN-I) HEINTGES T  
 COUNTRY COUNT: 100  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002093519	A2	20021121	(200311)*	GE	78
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW					
DE 10123041	A1	20021128	(200311)		
AU 2002342858	A1	20021125	(200452)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002093519	A2	WO 2002-EP5227	20020513
DE 10123041	A1	DE 2001-10123041	20010511
AU 2002342858	A1	AU 2002-342858	20020513

#### FILING DETAILS:

Searcher : Shears 571-272-2528

PATENT NO	KIND	PATENT NO
AU 2002342858	A1 Based on	WO 2002093519

PRIORITY APPLN. INFO: DE 2001-10123041 20010511

AN 2003-120726 [11] WPIDS

AB WO 200293519 A UPAB: 20030214

NOVELTY - Single-chain fragment (I) of a human antibody that inhibits **replication** of hepatitis C virus (HCV), and comprises the variable regions (Vl and Vh) of the light and heavy chains of an antibody directed against at least one essential viral protein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) DNA sequence (II) that encodes (I);

(2) (**gene transfer**) **vector** containing (II);

(3) identifying antibody fragments that inhibit **replication** of HCV;

(4) host **cells**, preferably **prokaryotic**, that are transformed with the **vector** of (2) and/or contain (II); and

(5) preparing (I) by growing cells of (4).

ACTIVITY - Virucide; Hepatotropic; Antiinflammatory.

No biological data is given.

MECHANISM OF ACTION - Vaccine; Passive immunization; Gene therapy.

USE - (I) are used to prepare vaccines, especially for passive immunization, and for diagnosis of HCV infection. The DNA (II) that encodes (I) is useful for gene therapy of HCV. (All claimed.) The sequence and structure of (I) can be used for design of HCV protein inhibitors.

Dwg.0/12

L6 ANSWER 9 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2003-093145 [08] WPIDS

DOC. NO. CPI: C2003-023391

TITLE: New composition for recombinational cloning of nucleic acid molecules, comprises at least one recombination protein and at least one Fis protein or its fragment.

DERWENT CLASS: B04 C06 D16

INVENTOR(S): BYRD, D R N; ESPOSITO, D

PATENT ASSIGNEE(S): (INVI-N) INVITROGEN CORP

COUNTRY COUNT: 101

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002086144	A2	20021031	(200308)*	EN	144
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE					
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG					
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM					
PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN					
YU ZA ZM ZW					
US 2003077804	A1	20030424	(200330)		

EP 1390394 A2 20040225 (200415) EN  
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL  
 PT RO SE SI TR  
 AU 2002258868 A1 20021105 (200433)  
 JP 2004531259 W 20041014 (200467) 219

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002086144	A2	WO 2002-US12331	20020419
US 2003077804	A1 Provisional	US 2001-284528P	20010419
		US 2002-125648	20020419
EP 1390394	A2	EP 2002-728842	20020419
		WO 2002-US12331	20020419
AU 2002258868	A1	AU 2002-258868	20020419
JP 2004531259	W	JP 2002-583657	20020419
		WO 2002-US12331	20020419

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1390394	A2 Based on	WO 2002086144
AU 2002258868	A1 Based on	WO 2002086144
JP 2004531259	W Based on	WO 2002086144

PRIORITY APPLN. INFO: US 2001-284528P 20010419; US  
 2002-125648 20020419

AN 2003-093145 [08] WPIDS

AB WO 200286144 A UPAB: 20030204

NOVELTY - A composition comprising at least one recombination protein and at least one Fis protein or its fragment, where the recombination protein is present in an amount for recombinational cloning of at least one nucleic acid molecule, and the Fis protein or its fragment is present in an amount for enhancing the efficiency of the recombinational cloning, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) recombinational cloning (M1) of at least one first nucleic acid molecule, comprising:

(a) forming a mixture by mixing the first nucleic acid molecule with at least one second nucleic acid molecule and with the above composition; and

(b) incubating the formed mixture under conditions to recombine the first nucleic acid molecule with the second nucleic acid molecule, where the first and second nucleic acid molecules each comprise at least one recombination site;

(2) enhancing (M2) recombinational cloning reactions, comprising contacting at least two nucleic acid molecules with at least one Fis protein or its fragment and at least one recombination protein, where the nucleic acid comprises at least one recombination site;

(3) a DNA molecule produced by (M2);

(4) a host cell comprising the DNA molecule;

(5) cloning (M3) at least one nucleic acid molecule comprising a nucleic acid segment flanked by at least two recombination sites that do not substantially recombine with each other, comprising:

(a) forming a combination by combining in vitro or in vivo:

(i) at least one Insert Donor molecule comprising the nucleic acid molecule;

(ii) at least one first **Vector** Donor molecule comprising the recombination sites; and  
 (iii) an amount of at least one recombination protein, or the Fis protein or its fragment;  
 (b) incubating the combination under conditions sufficient to **transfer** the **nucleic** acid molecule into the first **Vector** Donor molecule, to produce at least one first Product molecule; and  
 (6) a kit for use in recombinational cloning of the nucleic acid molecule, comprising at least one Fis protein or its fragment.  
 USE - The composition is useful in recombinational cloning of nucleic acid molecules using recombination systems.  
 Dwg.0/28

L6 ANSWER 10 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-723341 [78] WPIDS  
 DOC. NO. CPI: C2002-204830  
 TITLE: New continuously growing normal human T-lymphocyte cell line, usefull for preventing or treating cancer or viral infections, comprises a recombinant immune receptor with defined antigen specificity.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): KALTOFT, K  
 PATENT ASSIGNEE(S): (CELL-N) CELLCURE APS; (KALT-I) KALTOFT K  
 COUNTRY COUNT: 101  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002072796	A2	20020919	(200278)*	EN	99
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW					
EP 1399540	A2	20040324	(200421)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
AU 2002237217	A1	20020924	(200433)		
US 2004260061	A1	20041223	(200504)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002072796	A2	WO 2002-DK161	20020312
EP 1399540	A2	EP 2002-703529	20020312
		WO 2002-DK161	20020312
AU 2002237217	A1	AU 2002-237217	20020312
US 2004260061	A1 Provisional	US 2001-274643P	20010312
		WO 2002-DK161	20020312
		US 2003-471481	20031215

## FILING DETAILS:

PATENT NO	KIND	PATENT NO

AN 2002-723341 [78] WPIDS  
AB WO 200272796 A UPAB: 20021204

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(2) a method for treatment of an individual, comprising:

(b) providing an individual in need of treatment with the cell line or the composition; and

(3) a method of constructing the T-lymphocyte cell line, comprising introducing at least one first nucleotide sequence cited above into the T-lymphocyte cell line; and

(a) providing the T-lymphocyte cell line; and

ACTIVITY - Virucide; Cytostatic; Anti-HIV; Antiinflammatory. No  
logical data given.

USE - The T-lymphocyte cell line is useful as a medicament, or in manufacture of a medicament, for treating cancer or viral infection (e.g. HIV, Cytomegalovirus (CMV)) in an individual (unimpaired).

Dwg. 0/6

Searcher : Shears 571-272-2528

Not proof

DERWENT CLASS: B04 D16  
INVENTOR(S): CARSTENS, C  
PATENT ASSIGNEE(S): (STRA-N) STRATAGENE  
COUNTRY COUNT: 24  
PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG
WO 2002068670	A1 20020906	(200276)* EN	50	
RW:	AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR			
W:	AU CA JP			
EP 1373544	A1 20040102	(200409) EN		
R:	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR			
US 6696278	B1 20040224	(200415)		
AU 2002245438	A1 20020912	(200433)		
US 2004180443	A1 20040916	(200461)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002068670	A1	WO 2002-US4454	20020215
EP 1373544	A1	EP 2002-713596	20020215
		WO 2002-US4454	20020215
US 6696278	B1	US 2001-793372	20010226
AU 2002245438	A1	AU 2002-245438	20020215
US 2004180443	A1 Div ex	US 2001-793372	20010226
		US 2003-649547	20030827

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1373544	A1 Based on	WO 2002068670
AU 2002245438	A1 Based on	WO 2002068670
US 2004180443	A1 Div ex	US 6696278

PRIORITY APPLN. INFO: US 2001-793372 20010226; US  
2003-649547 20030827

AN 2002-707008 [76] WPDs  
AB WO 200268670 A UPAB: 20021125

NOVELTY - **Transferring genes** to a product **vector** comprising contacting in vitro a first and second **vector** and introducing the co-integrate **vector** into a **prokaryotic cell** to permit the formation of a product **vector**, is new.

DETAILED DESCRIPTION - **Transferring genes** to a product **vector** comprising:

(a) contacting (I) in vitro, which permits formation of co-integrate **vector**; and

(b) introducing the co-integrate **vector** into a **prokaryotic cell** to permit the formation of a product **vector** comprising the gene of interest interposed between the double-stranded origin of **replication** of the second **vector** and the site-specific recombination recognition site, the single-stranded origin of **replication**

of the second **vector**, and the gene encoding the second selectable marker, where the product **vector** does not include both the negative selectable marker and the gene encoding the first selectable marker.

INDEPENDENT CLAIMS are also included for the following:

(1) a pair of **vectors** (I) comprising:

(a) a first **vector** comprising a gene or a cloning site for the insertion of a gene, a gene encoding a first selectable marker, a double-stranded origin of **replication** and a site-specific recombination recognition site, where the gene is interposed between the double-stranded origin of **replication** of a rolling circle **replicon** and the site-specific recombination recognition site; and

(b) a second **vector** comprising a negative selectable marker, a double-stranded and double-stranded origin of **replication** of a rolling circle **replicon**, a site-specific recombination recognition site and a gene encoding a second selectable marker, where the gene encoding the negative selectable marker is interposed between the double-stranded origin of **replication** of a rolling circle **replicon** and the site-specific recognition site, where one or both of the **vectors** have no second site-specific recombinase recognition site between the double-stranded origin of **replication** and the site-specific recombination site;

(2) a product **vector** comprising a gene, a double-stranded origin of **replication** of a rolling circle **replicon**, a site-specific recombination site, a single-stranded origin of **replication** and a nucleic acid sequence encoding a second selectable marker, where the gene is interposed between the double-stranded origin of **replication** of a rolling circle **replicon** and the site-specific recombination recognition site; and

(3) a kit for the **transfer** of **gene** to a product **vector** comprising (I) and packaging materials.

USE - The method is useful for generating recombinant **vectors**. These recombinant **vectors** are useful in expressing mammalian cell and bacterial hosts, purification of the native protein by employing specialized purification tags and detection of interaction with other proteins.

ADVANTAGE - The invention provides an improved method of **gene transfer** from one **vector** to another without the need for the traditional steps of restriction enzyme digestion, purification and ligation, with high fidelity and efficiency, that allows for its adaptation in automated procedures.  
Dwg.0/6

L6	ANSWER 12 OF 43	WPIDS	COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:		2002-519375 [55]	WPIDS
DOC. NO. CPI:		C2002-146958	
TITLE:		Introducing heterologous DNA into non-plant host cell for producing gene product, by inserting the DNA into binary bacterial artificial chromosome <b>vector</b> , transforming the cell and expressing the DNA in the cell.	
DERWENT CLASS:		B04 D16	
INVENTOR(S):		HAMILTON, C; HANSON, M R	
PATENT ASSIGNEE(S):		(CORR) CORNELL RES FOUND INC; (HAMI-I) HAMILTON C; (HANS-I) HANSON M R	
COUNTRY COUNT:		96	

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002040641	A2	20020523	(200255)*	EN	28
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE					
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG					
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL					
PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
US 2002123100	A1	20020905	(200260)		
AU 2002039426	A	20020527	(200261)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002040641	A2	WO 2001-US45327	20011019
US 2002123100	A1 Provisional	US 2000-241688P	20001019
		US 2001-976687	20011012
AU 2002039426	A	AU 2002-39426	20011019

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002039426	A Based on	WO 2002040641

PRIORITY APPLN. INFO: US 2001-976687 20011012; US  
2000-241688P 20001019

AN 2002-519375 [55] WPIDS

AB WO 2002040641 A UPAB: 20021018

NOVELTY - Introducing (M1) heterologous DNA (I) into non-plant host cell for producing gene product in cell involves inserting (I) encoding gene product into restriction endonuclease cleavage site of **vector** (II) having two origin of **replication** for maintaining (I) as single copy in Escherichia coli and Agrobacterium tumefaciens respectively, transforming the cell with (II), and expressing (I).

DETAILED DESCRIPTION - (M1) involves:

(a) inserting heterologous DNA encoding the gene product into a unique restriction endonuclease cleavage site of (II), where (II) comprises:

(i) a backbone which includes a first origin of **replication** capable of maintaining heterologous DNA as a single copy in Escherichia coli host cell, and which further includes a second origin of **replication** capable of maintaining heterologous DNA as a single copy in an Agrobacterium tumefaciens host cell;

(ii) a unique restriction endonuclease cleavage site for insertion of the heterologous DNA; and

(iii) left and right Agrobacterium T-DNA border sequences flanking the unique restriction endonuclease cleavage site, the left and right T-DNA border sequences allowing introduction of heterologous DNA located between left and right T-DNA border sequences into a non-plant cell;

(b) transforming a non-plant cell to introduce the heterologous DNA into the cell; and

(c) expressing the heterologous DNA in the non-plant cell so as to produce the gene product encoded by the heterologous DNA into the cell.

INDEPENDENT CLAIMS are also included for the following:

(1) a non-plant eukaryotic host cell (III) containing (II); and  
 (2) isolating (M2) DNA encoding a desired gene product from a genomic library of DNA involves inserting a heterologous DNA from a genomic library of DNA into (II), introducing (II) into the non-plant host cell, and expressing the heterologous DNA in the non-plant host cell to produce the gene product encoded by the heterologous DNA, screening the cultured host cells for those cells that express the desired gene product, and isolating the DNA encoding the desired gene product from those cells that express the desired gene product.

USE - (M1) is useful for introducing heterologous DNA into a non-plant host cell for producing a gene product. (M2) is useful for isolating a DNA encoding a desired gene product from a genomic library of DNA (all claimed). (M1) is useful for screening a genomic library for expression of a desired gene product and for the construction of genomic libraries with large DNA inserts and for cloning a cluster of genes. (M1) is useful for gene prospecting i.e., discovery, expression, and production of novel pathways and in identifying DNA which encodes genes that results in the production or degradation of important compounds. Binary bacterial artificial chromosome (BIBAC) **vector** (II) is utilized in the expression of DNA for production of the useful compounds in commercial quantities.

DESCRIPTION OF DRAWING(S) - The figure shows the map of the binary bacterial artificial chromosome (BIBAC) **vector**.  
 Dwg.1/2

L6 ANSWER 13 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-257483 [30] WPIDS  
 DOC. NO. CPI: C2002-076644  
 TITLE: Nucleic acid constructs which integrate into chromosomes at telomeric or subtelomeric position due to the presence of multiple repeats of telomeric sequences, useful for assaying alternative lengthening of telomeres.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): DUNHAM, M A; FASCHING, C L; NEUMANN, A A; REDDEL, R R  
 PATENT ASSIGNEE(S): (CHIL-N) CHILDRENS MEDICAL RES INST; (DUNH-I) DUNHAM M A; (FASC-I) FASCHING C L; (NEUM-I) NEUMANN A A; (REDD-I) REDDEL R R  
 COUNTRY COUNT: 97  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002012515	A1	20020214	(200230)*	EN	57
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE					
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG					
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL					
PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA					
ZW					
AU 2001077402	A	20020218	(200244)		
EP 1309707	A1	20030514	(200333)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL					
PT RO SE SI TR					

JP 2004504862 W 20040219 (200414) 93  
 US 2004038244 A1 20040226 (200416)

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002012515	A1	WO 2001-AU954	20010806
AU 2001077402	A	AU 2001-77402	20010806
EP 1309707	A1	EP 2001-955134	20010806
		WO 2001-AU954	20010806
JP 2004504862	W	WO 2001-AU954	20010806
		JP 2002-517803	20010806
US 2004038244	A1	WO 2001-AU954	20010806
		US 2003-343969	20030821

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001077402	A Based on	WO 2002012515
EP 1309707	A1 Based on	WO 2002012515
JP 2004504862	W Based on	WO 2002012515

PRIORITY APPLN. INFO: AU 2000-9234 20000807

AN 2002-257483 [30] WPIDS

AB WO 200212515 A UPAB: 20020513

NOVELTY - Nucleic acid constructs (I,II) integrating first or second DNA tag sequences (T1,T2) into telomeres or subtelomeric chromosome positions respectively, by homologous recombination, are new.

DETAILED DESCRIPTION - Nucleic acid constructs (I,II) integrate first or second DNA tag sequences (T1,T2) into telomeres or subtelomeric chromosome positions respectively, by homologous recombination. (I) comprises T1 linked to S1 positioned 3' of T1, and S2 positioned 5' of T1, where S1 and S2 comprise multiple repeats homologous to human telomere DNA. (II) comprises T2 linked to S1 positioned 3' of T2, and optionally a third DNA sequence (S3) positioned 5' of T2. (S1) comprises multiple repeats homologous to human telomere DNA, and S3 does not contain a nucleic acid sequence homologous to human telomere DNA. T1 and T2 comprise first and second markers (M1,M2), respectively.

INDEPENDENT CLAIMS are also included for the following:

(1) a host cell (III) comprising (I) and/or (II), where the host cell comprises one or more T1 integrated into one or more telomeres and/or one or more T2 integrated into one or more chromosomes at a subtelomeric position;

(2) a nucleic acid **vector** (IV) which comprises and/or when linearized comprises (I) or (II);

(3) producing (I) or (II) by linearizing a nucleic acid **vector** comprising (I) or (II); and

(4) a kit comprising (IV).

ACTIVITY - Cytostatic. No supporting data is given.

MECHANISM OF ACTION - ALT inhibitor.

USE - (I) is useful for assaying alternative lengthening of telomeres (ALT activity) involving introducing (I) into the cell; selecting cells with T1 (a first eukaryotic selectable marker) integrated into one or more telomeres; allowing cells to undergo division; and determining the presence of T1 in other telomeres. The cells (tumor cells from human, animal, or immortalized cells) are

incubated to confer a selective growth advantage on cells comprising M1.

Locating T1 in additional telomeres is done by fluorescence in situ hybridization (FISH) using probes for a first DNA sequence, or by Southern blotting of genomic DNA from cells with a probe for T1 or polymerase chain reaction (PCR) amplification using primers for T1. The method further involves introducing (II) into the cell, selecting cells with T2 in their telomeres and detecting T2 in additional telomeres, after cell division. The cells are incubated to confer a growth advantage on cells that comprise M2.

(III) having ALT activity and comprising T1 which is integrated into telomeres is useful for screening an anti-cancer compound which involves:

- (a) contacting (III) with a test compound;
- (b) allowing the cell to undergo cell division; and
- (c) determining in cell progeny if there is a change in the rate or incidence of telomeric incorporation of T1 in additional telomeres compared with untreated cells.

When (III) comprising T1 integrated into a telomere of the first chromosome of the cell, and T2 integrated into a second chromosome of cell at a sub-telomeric position, is employed, any change in rate or incidence of T1 copying into a telomere that containing T2 compared with untreated cells, is determined. Determination involves PCR amplification which detects presence of chromosomes containing T1 and T2. Optionally, the determination step (D1) involves:

- (a) recovering nucleic acids from a cell;
- (b) contacting recovered nucleic acids with one or more endonucleases which cleave the first and second endonuclease recognition site (ERS) in T1 and T2;
- (c) contacting the nucleic acids with an enzyme that catalyses intramolecular ligation of the nucleic acids;
- (d) introducing the nucleic acids into one or more bacterial cells; and
- (e) selecting bacterial cells comprising the first and second **prokaryotic** selectable marker.

Preferably, (III) having T1 and T2, comprises a chromosome comprising a third DNA tag sequence (T3) integrated at an interstitial site, where T3 comprises third **prokaryotic** selectable marker. T3 is flanked by ERS, and step (b) of D1 further comprises contacting recovered nucleic acids with one or more endonucleases that cleave ERS flanking T3; and step (e) of D1 further comprises selecting bacterial cells comprising a third **prokaryotic** selectable marker.

The telomeric sequences positioned 5' to T2 integrated at a subtelomeric position comprise a third unique ERS and the method further comprises, a step of introducing into the cell a third endonuclease which cleaves the third unique ERS in the telomeric sequences prior to contact with the test compound.

(II) is useful for removing a distal part of a telomere in a cell by transfecting with (II), incubating the cell to allow subtelometric integration of (II) and introducing an HO endonuclease which cleaves third ERS.

(III) having ALT activity and comprising T1 integrated into one or more telomeres, is useful for determining whether a gene product affects ALT activity in a eukaryotic cell which involves altering levels of the gene product in the cell, and determining in cell progeny whether there is any change in rate or incidence of telomeric incorporation of T1 in additional telomeres compared with control cells.

When (III) comprising T1 which is integrated into a telomere of the first chromosome of the cell, and T2 which is integrated into a second chromosome of a cell at a sub-telomeric position, is employed, any change in rate or incidence of telomeric incorporation of T1 in additional telomeres in cell progeny as compared with control cells, is determined. Levels of the gene product are altered by introducing into the cell a nucleic acid which is capable of directing expression of the heterologous gene product, and incubating cells to cause gene expression.

(III) is useful for introducing a tagged telomere into host cells which involves **transferring** a chromosome with a **DNA** tagged-telomere, or subtelomere from a donor host cell which is (III), to a recipient cell by microcell mediated chromosome **transfer**.

The kit is useful for assaying ALT activity in an eukaryotic cell (all claimed).

(III) can be used to test candidate ALT repressor genes to test candidate genes for activation of ALT, and to screen compounds for their ability to act as ALT inhibitors. The ALT activity assays are useful for determining whether immortalized cells utilize the ALT telomere maintenance mechanism, determining whether a gene and/or its expression product(s) increase or decrease ALT activity. ALT inhibitors identified by the above mentioned methods may be used for short term and/or long term treatment of any cancer, and for preventing recurrence of cancer or for preventing cancer in individuals with high risk of cancer.

ADVANTAGE - The plasmid constructs can be targeted to any telomere without causing a truncation to the chromosome.  
Dwg.6/9

L6 ANSWER 14 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-255941 [30] WPIDS  
 DOC. NO. CPI: C2002-076291  
 TITLE: New isolated and/or recombinant ubiquitin ligase such as SIP (SKP Interacting Protein) ligase, for treating diseases associated with aberrant protein degradation, cell proliferation, differentiation, and cell survival.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): CALIGIURI, M; ROLFE, M  
 PATENT ASSIGNEE(S): (CALI-I) CALIGIURI M; (ROLF-I) ROLFE M; (GPCB-N) GPC BIOTECH INC  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002025569	A1	20020228	(200230)*		44
US 6747128	B2	20040608	(200437)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002025569	A1	US 1997-915048	19970820
US 6747128	B2	US 1997-915048	19970820

PRIORITY APPLN. INFO: US 1997-915048 19970820

Searcher : Shears 571-272-2528

AN 2002-255941 [30] WPIDS  
 AB US2002025569 A UPAB: 20020513

NOVELTY - An isolated and/or recombinant ubiquitin ligase (I), such as SIP (SKP Interacting Protein) ligase, for example isolated and/or recombinant cdc4 polypeptide comprising a sequence identical or homologous to a sequence (S1) comprising 1121 or 162 amino acids, given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated nucleic acid (II) comprising a sequence encoding a cdc4 polypeptide or its portion, or a complement or (II);
- (2) an isolated nucleic acid (III) comprising a sequence encoding a vertebrate SIP polypeptide;
- (3) an expression **vector** (IV) capable of **replicating** in a **prokaryotic** or eukaryotic **cell** comprising (IV);
- (4) a host cell (V) transfected with (IV) and expressing (I);
- (5) production of (I);
- (6) a transgenic animal (VI) having cells which harbor a transgene comprising (II) or (III), or in which a gene comprising (II) or (III) is disrupted;
- (7) an isolated nucleic acid (VII) which selectively hybridizes under high stringency conditions to at least 10 nucleotides of a sequence (S2) comprising 3363 or 484 base pairs, given in the specification, or its complement, where (VII) can specifically detect or amplify a sequence of a vertebrate cdc4 gene;
- (8) a reconstituted protein mixture (VIII) comprising an SIP polypeptide and a cell-cycle regulatory protein;
- (9) an isolated SIP polypeptide (IX) having a ubiquitin group attached to cysteine;
- (10) an assay (M1) for identifying an inhibitor of an SIP-mediated ubiquitination;
- (11) an assay (M2) for identifying an inhibitor of an interaction between a substrate polypeptide and a SIP protein;
- (12) diagnosing (M3) a hyperproliferative disorder in a patient where the disorder is associated with the destabilization of a CKI protein in cells of the patient, by ascertaining the level of expression of a SIP ligase in a sample of cells from the patient, and diagnosing the presence or absence of hyperproliferative disorder utilizing, at least in part, the ascertained level expression or activity of the ligase, where an increase level of a SIP protein or SIP ligase activity in the sample, relative to a normal control sample of cells, correlates with the presence of a hyperproliferative disorder; and
- (13) a prognostic method (M4) for evaluating the aggressiveness and/or rate of recurrence of a disorder marked by aberrant hyperproliferation, aberrant dedifferentiation and/or aberrant apoptosis of cells, by ascertaining the level of SIP ligase expression and/or SIP ligase activity in a sample of cells from a patient, and ascertaining the aggressiveness and/or risk for recurrence of the disorder, at enzymatic activity, where an increased level in the sample, relative to a normal control sample of cells, correlates with a more aggressive form of the disorder and an increased risk of recurrence of the disorder.

ACTIVITY - Cytostatic; antipsoriatic; antiarteriosclerotic; antiinflammatory.

MECHANISM OF ACTION - Cell proliferation, differentiation, and/or survival modulator; cell-cycle of an eukaryotic cell regulator; entry of a mammalian or yeast cell into S phase modulator; wild-type form of

SIP protein agonist/antagonist; gene therapy; antisense therapy. No biological data is given.

USE - (I) is useful for modulating cell proliferation, differentiation, and/or survival, and for treating diseases or conditions associated with aberrant protein degradation, cell proliferation, differentiation and/or cell survival, where the diseases are selected from cancer, leukemia, psoriasis, bone diseases, proliferative disorders such as involving connective tissues, atherosclerosis, and other smooth muscle proliferative disorder, and chronic inflammation. (I) is useful for mediating and/or catalyzing the **transfer** of a ubiquitin molecule from a relevant ubiquitin conjugating enzyme (UBC) to a lysine residue of its substrate protein, for regulating the cell-cycle of an eukaryotic cell, for modulating proliferation/cell growth of a eukaryotic cell, for modulating entry of a mammalian or yeast cell into S phase, for ubiquitination of a cell-cycle regulator, e.g., a cyclin dependent kinase inhibitor, e.g., p27, for modulating differentiation of cells/tissue, for modulating cell growth or proliferation by influencing the action of other cellular proteins, as a specific agonist of the function of the wild-type form of the protein, or as a specific antagonist, such as a catalytically inactive mutant. (I) is useful for generating an interaction trap assay and subsequently detecting agents with disrupt binding of the proteins. A **nucleic acid** (II) encoding (I) is useful for generating expression constructs and in antisense therapy.

Dwg.0/2

L6 ANSWER 15 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2002-350789 [38] WPIDS  
 CROSS REFERENCE: 1991-119233 [17]; 1995-346090 [45]; 2000-259135 [23];  
 2001-256683 [26]; 2001-281051 [29]; 2001-298941 [31];  
 2001-353108 [37]; 2001-366062 [38]; 2001-407312 [43];  
 2002-684093 [74]; 2003-851459 [79]; 2004-497128 [47];  
 2004-707481 [69]; 2005-160562 [17]; 2005-321855 [33]  
 DOC. NO. NON-CPI: N2002-275602  
 DOC. NO. CPI: C2002-099601  
 TITLE: Novel non-naturally-occurring stem cell factor  
 polypeptide, useful for treating leucopenia,  
 thrombocytopenia, anemia and for enhancing  
 engraftment of bone marrow during transplantation in  
 a mammal.  
 DERWENT CLASS: A96 B04 D16 S03  
 INVENTOR(S): BOSSELMAN, R A; MARTIN, F H; SUGGS, S V; ZSEBO, K M  
 PATENT ASSIGNEE(S): (BOSS-I) BOSSELMAN R A; (MART-I) MARTIN F H; (SUGG-I)  
 SUGGS S V; (ZSEB-I) ZSEBO K M  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2002018763	A1	20020214	(200238)*		217

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2002018763	A1 Div ex	US 1995-449653	19950524
		US 1998-5243	19980112

## FILING DETAILS:

	PATENT NO	KIND	PATENT NO
	US 2002018763	A1 Div ex	US 6248319

PRIORITY APPLN. INFO: US 1995-449653 19950524; US  
1998-5243 19980112

AN 2002-350789 [38] WPIDS

CR 1991-119233 [17]; 1995-346090 [45]; 2000-259135 [23]; 2001-256683 [26]; 2001-281051 [29]; 2001-298941 [31]; 2001-353108 [37]; 2001-366062 [38]; 2001-407312 [43]; 2002-684093 [74]; 2003-851459 [79]; 2004-497128 [47]; 2004-707481 [69]; 2005-160562 [17]; 2005-321855 [33]

AB US2002018763 A UPAB: 20050524

NOVELTY - A non-naturally-occurring stem cell factor (SCF) polypeptide (Ia) having an amino acid sequence sufficiently duplicative of that of naturally-occurring SCF to allow possession of a hematopoietic biological activity of naturally occurring SCF, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) a purified polypeptide (Ib):
  - (a) comprising naturally-occurring SCF;
  - (b) having part or all of a sequence (S1) comprising 183, 248 or 220 amino acids fully defined in the specification;
  - (c) having part or all of the secondary conformation of naturally-occurring SCF and S1 and having a property of naturally-occurring human SCF, or any allelic variants, derivatives, deletion analogs, substitution analogs, or their addition analogs, or
  - (d) characterized by being the product of prokaryotic or eukaryotic expression of an exogenous DNA sequence.
- (2) an isolated DNA sequence (II) for use in securing expression in a host cell of (Ia) comprising a sequence (S2) of 2413, 849, 3807, 820, 1404 or 1088 nucleotides fully defined in the specification or their complements, DNA sequences which hybridize to S2 or its complement, or DNA sequences which, but for the degeneracy of the genetic code, would hybridize to the above DNA sequences;
- (3) a polypeptide product of the expression of (II) in a host cell;
- (4) a DNA sequence (IIa) coding for a polypeptide fragment or analog of naturally-occurring SCF;
- (5) a biologically functional plasmid or viral DNA vector (III) including (II);
- (6) a **prokaryotic** or eukaryotic host cell (IV) transformed or transfected with (II) in a manner allowing the host cell to express the polypeptide product, or stably transfected or transformed with (III);
- (7) producing (Ia);
- (8) a composition (C1) comprising a purified and isolated human SCF free of association with any human protein in glycosylated or non-glycosylated form;
- (9) an antibody (Ab) specifically binding to SCF;
- (10) a method for efficient recovery of SCF from SCF containing material, comprising subjecting the material to reverse phase liquid chromatographic separation; and
- (11) a biologically active composition (C2) comprising (Ia) covalently attached to a water-soluble polymer.

ACTIVITY - Cytostatic; antianemic; immunosuppressive; protozoacide; neuroprotective; antiinfertility; tuberculostatic;

antibacterial; anti-HIV.

MECHANISM OF ACTION - Stimulator of growth of primitive progenitors including early hematopoietic progenitor cells.

Bone marrow was harvested from normal donor mice and transplanted into W/Wv mice. The blood profile of the recipient animal was followed at different times post transplantation and engraftment of the donor marrow was determined by the shift of the peripheral blood cells from recipient to donor phenotype. The profile for each transplanted animal was compared to that for both donor and recipient un-transplanted control animals at each time point. Approximately  $3 \times 10^5$  cells were transplanted without SCF treatment (control group from C56BL/6J donors into W/Wv recipients). A second group received  $3 \times 10^5$  donor cells which had been treated with SCF (600 U/ml) at 37 deg. C for 20 minutes and injected together. In a third group, the recipient mice were injected subcutaneously with approximately 400 U SCF/day for 3 days after transplantation of  $3 \times 10^5$  donor cells. In both SCF-treated groups the donor marrow was engrafted faster than the untreated control group. By 29 days post-transplantation, SCF pre-treated group had converted to donor phenotype.

USE - (Ia) is useful for treating leucopenia, thrombocytopenia and anemia, and for enhancing engraftment of bone marrow during transplantation in a mammal and bone marrow recovery in treatment of radiation, chemical or chemotherapeutic induced bone marrow aplasia or myelosuppression. (Ia) is also useful for treating acquired immune deficiency in a human, neoplasia, nerve damage, infertility, intestinal damage and myeloproliferative disorder in a mammal. (Ia) is also useful for preparing a biologically active polymer polypeptide adduct, for enhancing transfection of early hematopoietic progenitor cells with a **gene**, and **transfer** of a **gene** into a mammal (claimed).

(Ia) is useful for treating myelofibrosis, myelosclerosis, osteopetrosis, metastatic carcinoma, acute leukemia, multiple myeloma, Hodgkin's disease, lymphoma, Gaucher's disease, Niemann-Pick disease, Letterer-Siwe disease, refractory erythroblastic anemia, Di Guglielmo syndrome, congestive splenomegaly, Kala azar, sarcoidosis, primary splenic pancytopenia, military tuberculosis, disseminated fungus disease, Fulminating septicemia, malaria, vitamin B12 and folic acid deficiency, pyridoxine deficiency, Diamond Blackfan anemia, hypopigmentation disorders such as piebaldism and vitiligo, and AIDS.

(II) is useful as labeled probes in isolating human genomic DNA encoding SCF, and in hybridization processes to locate the human SCF gene position and/or any related gene family in a chromosomal map.

(II) is also useful for identifying SCF gene disorders at DNA level and as genetic markers for identifying neighboring genes and their disorders.

Dwg.0/70

L6 ANSWER 16 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-502635 [47] WPIDS  
 CROSS REFERENCE: 1995-131189 [17]; 2000-136688 [12]; 2003-755064 [71];  
 2003-897265 [82]  
 DOC. NO. CPI: C2003-134168  
 TITLE: Novel **prokaryotic** host cell for  
 treating tumor cells and virally infected  
 cells transformed or transfected by a  
**vector** comprising a DNA sequence encoding  
 Escherichia coli derived purine nucleoside  
 phosphorylase.  
 DERWENT CLASS: B04 D16

10/649547

INVENTOR(S): BENNETT, L L; GADI, V K; PARKER, W B; SORSCHER, E J;  
WAUD, W  
PATENT ASSIGNEE(S): (SOUR) SOUTHERN RES INST; (UABR-N) UAB RES FOUND  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6491905	B1	20021210	(200347)*		45

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6491905	B1 CIP of	US 1993-122321	19930914
	CIP of	US 1996-702181	19960823
	CIP of	US 1997-881772	19970624
	Provisional	US 1997-64676P	19971031
		US 1998-183188	19981030

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 6491905	B1 CIP of	US 5552311
	CIP of	US 6017896

PRIORITY APPLN. INFO: US 1997-64676P 19971031; US  
1993-122321 19930914; US  
1996-702181 19960823; US  
1997-881772 19970624; US  
1998-183188 19981030

AN 2003-502635 [47] WPIDS  
CR 1995-131189 [17]; 2000-136688 [12]; 2003-755064 [71]; 2003-897265 [82]  
AB US 6491905 B UPAB: 20031223

NOVELTY - A **prokaryotic** host cell (I) transformed or transfected by a **vector** comprising a DNA sequence encoding an Escherichia coli derived purine nucleoside phosphorylase (PNP) having a 5013 nucleotide sequence (S1), given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a **vector** (II) comprising a DNA sequence encoding an E. coli derived PNP comprising S1; and

(2) killing (M) targeted **replicating** or nonreplicating mammalian cells and bystander cells, by:

(a) administering a transformed **prokaryotic** host cell obtained by transfecting a **prokaryotic** host cell with a DNA sequence encoding PNP or hydrolase, by delivering an effective amount of a transformed **prokaryotic** host cell selected from Salmonella and Clostridium host cells to mammalian cells by intravenous or intraperitoneal injection, or delivering an effective amount of a transformed **prokaryotic** host cell to a mammalian tumor intratumorally, and contacting the mammalian cells treated with the transformed **prokaryotic** host cell with an effective amount of a substrate for PNP or hydrolase, where the substrate is substantially non-toxic to mammalian cells and is cleaved by PNP to yield purine analog toxic to the mammalian cells;

Searcher : Shears 571-272-2528

(b) contacting the mammalian cells with a bacteria selected from Salmonella and Clostridium that targets tumor cells, where the bacteria contains a nucleic acid sequence encoding a purine cleavage enzyme that cleaves an adenosine, and the enzyme is a naturally expressed component of the bacteria that targets tumor cells and the contact is by direct tumoral, intravenous or intraperitoneal injection, and contacting the mammalian cells with an effective amount of a substrate for the adenosine cleaving purine cleavage enzyme, where the substrate is substantially non-toxic to mammalian cells and is cleaved by the enzyme to yield a purine analog toxic to the mammalian cells and the bystander cells, to kill the mammalian cells and the bystander cells; or

(c) administering a Clostridium spore being obtained from a Clostridium host cell transfected with a DNA sequence encoding PNP or hydrolase by delivering an effective amount of Clostridium spore to mammalian cells by intravenous or intraperitoneal injection, and delivering an effective amount of a Clostridium spore to a mammalian tumor intratumorally, and contacting the mammalian cells treated with Clostridium spore with an effective amount of a substrate for PNP or hydrolase, where the substrate is substantially non-toxic to mammalian cells and is cleaved by PNP to yield a purine analog toxic to the mammalian cells.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Kills tumor cells by producing toxic compounds in the tumor cells. MeP-dR (160 micro M) was added to wells containing untransfected cells, or cells transfected with 10, 20 or 40 micro g of cDNA containing either E. coli PNP or LacZ **genes** under control of the SV-40 early promoter. After 5 days, the cells were removed from each well and the number of dye excluding cells were determined with the aid of a hemacytometer. 30-50 % toxicity due to the N-(1-(2,3-dioleoyloxy)propyl)-N,N,N-trimethyl- ammonium chloride (DOTMA)-1,2-Dioleoyl-sn-glycero-3-phosphoethanolamine (DOPE) transfection protocol was acceptable for cationic liposome mediated **gene transfer** to T-84 in vitro when performed under optimal conditions. The results were shown graphically. MeP-dR (160 micro M) was minimally toxic to the cells that were not transfected. While expression of the LacZ **gene** had no influence on toxicity mediated by MeP-dR, MeP-dR killed virtually all of the cells transfected with the E. coli PNP. Substantial killing was seen with 16 micro M MeP-dR after PNP transfection. The results indicated that low efficiency expression of E. coli PNP cDNA (expression in less than 1 % of tumor cells) was adequate for nearly 100 % transfected cell and bystander cell killing. In addition, because diffusion of MeP into the medium covering the cells could have a substantial dilutional effect, it may be that an even lower fraction of tumor cells expressing E. coli PNP in vivo might be able to mediate tumor cell necrosis in the presence of MeP-dR.

USE - (M) is useful for killing targeted **replicating** or nonreplicating mammalian cells and bystander cells (claimed). (I) is useful in combination with purine substrate for treating tumor cells and/or virally infected cells.

Dwg.0/17

L6	ANSWER 17 OF 43	WPIDS	COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:	2003-314347 [31]	WPIDS	
DOC. NO. CPI:	C2004-021920		
TITLE:	Human collagen-like protein produced by culturing transformant bacteria, for use in surgical sutures, artificial skins, collagen-film coating layers as		

well as artificial-organ coating layers, and in  
paints.  
DERWENT CLASS: B04 D16  
INVENTOR(S): FAN, D  
PATENT ASSIGNEE(S): (FAND-I) FAN D  
COUNTRY COUNT: 100  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CN 1371919	A	20021002	(200331)*		
WO 2003106494	A1	20031224	(200406)	B ZH	25
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE					
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG					
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM					
PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ					
VN YU ZA ZM ZW					
AU 2002327265	A1	20031231	(200451)#		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1371919	A	CN 2001-106757	20010221
WO 2003106494	A1	WO 2002-CN424	20020614
AU 2002327265	A1	AU 2002-327265	20020614
		WO 2002-CN424	20020614

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2002327265	A1 Based on	WO 2003106494

PRIORITY APPLN. INFO: CN 2001-106757, 20010221; WO  
2002-CN424, 20020614; AU  
2002-327265, 20020614

AN 2003-314347 [31] WPIDS  
AB WO2003106494 A UPAB: 20040123 ABEQ treated as Basic  
NOVELTY - A human collagen-like protein containing a defined amino  
acid sequence (I) of 1071 amino acids given in the specification, is  
new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:  
(1) a polynucleotide sequence containing a base sequence of (II)  
with 54 base pairs;

(2) a prokaryotic bacterium containing a repeat sequence of the  
polynucleotide sequence; and

(3) a method for producing the human collagen-like protein  
comprising construction of an engineered bacterium for producing such  
protein; culturing the bacterium; inducing and expressing the human  
collagen-like protein; and purifying the target protein.

USE - The recombinant proteins are for use after processing in  
surgical sutures, artificial skins, collagen-film coating layers as  
well as artificial organ coating layers, and in paints with superior  
surface adhesion obtained by binding with silver halide, dyes etc.  
(all claimed).

ADVANTAGE - The recombinant protein can be expressed in high

level by the genetically-engineered bacteria. Such protein has repeat-helical structure which is different from the native collagen-like protein by having unique chemical structure and with function superiority to the native collagen.

Dwg.0/0

AB CN 1371919 A UPAB: 20040128

NOVELTY - A human collagen-like protein containing a defined amino acid sequence (I) of 1071 amino acids given in the specification, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:  
(1) a polynucleotide sequence containing a base sequence of (II) with 54 base pairs;

(2) a prokaryotic bacterium containing a repeat sequence of the polynucleotide sequence; and

(3) a method for producing the human collagen-like protein comprising construction of an engineered bacterium for producing such protein; culturing the bacterium; inducing and expressing the human collagen-like protein; and purifying the target protein.

USE - The recombinant proteins are for use after processing in surgical sutures, artificial skins, collagen-film coating layers as well as artificial organ coating layers, and in paints with superior surface adhesion obtained by binding with silver halide, dyes etc. (all claimed).

ADVANTAGE - The recombinant protein can be expressed in high level by the genetically-engineered bacteria. Such protein has repeat-helical structure which is different from the native collagen-like protein by having unique chemical structure and with function superiority to the native collagen.

Dwg.0/0

L6 ANSWER 18 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2001-291054 [30] WPIDS  
CROSS REFERENCE: 2004-552661 [53]; 2004-707138 [69]  
DOC. NO. CPI: C2001-089349  
TITLE: New **nucleic** acid expression constructs, useful for screening for agents that alter mitochondrial permeability transition (MPT), comprises polynucleotide encoding MPT polypeptide or cyclophilin polypeptide fused to energy **transfer** molecule.  
DERWENT CLASS: B04 D16  
INVENTOR(S): ANDREYEV, A Y; CLEVINGER, W; DAVIS, R E; FRIGERI, L G; MURPHY, A N; VELICELEBI, G; WILEY, S E; VELECELEBI, G  
PATENT ASSIGNEE(S): (MITO-N) MITOKOR  
COUNTRY COUNT: 95  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001032876	A2	20010510	(200130)*	EN	154
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK					
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR					
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO					
RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2001013622	A	20010514	(200149)		
EP 1228206	A2	20020807	(200259)	EN	

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL  
 PT RO SE SI TR  
 JP 2003516128 W 20030513 (200334) 216  
 US 6562563 B1 20030513 (200335)

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001032876	A2	WO 2000-US30535	20001103
AU 2001013622	A	AU 2001-13622	20001103
EP 1228206	A2	EP 2000-975595	20001103
		WO 2000-US30535	20001103
JP 2003516128	W	WO 2000-US30535	20001103
		JP 2001-535558	20001103
US 6562563	B1	US 1999-434354	19991103

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001013622	A Based on	WO 2001032876
EP 1228206	A2 Based on	WO 2001032876
JP 2003516128	W Based on	WO 2001032876

PRIORITY APPLN. INFO: US 1999-434354 19991103

AN 2001-291054 [30] WPIDS  
 CR 2004-552661 [53]; 2004-707138 [69]

AB WO 200132876 A UPAB: 20041027

NOVELTY - A **nucleic** acid expression construct (I) comprising a promoter operably linked to a polynucleotide encoding a mitochondrial permeability transition (MPT) pore component polypeptide fused to an energy **transfer** molecule (ETM) polypeptide or its variant, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a nucleic acid expression construct (II) comprising a promoter operably linked to a polynucleotide encoding a cyclophilin (Cyp) polypeptide fused to an ETM polypeptide or its variant;

(2) a polypeptide (III) comprising a MPT pore component polypeptide fused to an ETM polypeptide or its derivative;

(3) a polypeptide (IV) comprising a Cyp polypeptide fused to an ETM polypeptide or its derivative;

(4) a host cell (V) for identifying agents that alter MPT comprising (I) and (II), where binding of the MPT pore component to the Cyp polypeptide results in detectable energy transfer between the first and second ETM;

(5) screening (M1) for an agent that alters MPT comprising:

(a) contacting (V) containing a mitochondrion with a candidate agent and an inducer of MPT;

(b) exposing (V) to an excitation energy;

(c) detecting a level of energy transfer between the first and second ETM; and

(d) comparing the level of energy transfer to a first reference level generated in the absence of candidate agent and identifying an agent that alters MPT;

(6) detecting (M2) an agent that alters MPT comprising:

(a) contacting a CypD polypeptide with an ANT polypeptide and a candidate agent; and

(b) detecting a level of binding of CypD polypeptide to ANT polypeptide, relative to a level of binding detected in the absence of the candidate agent;

(7) an agent (VI) capable of altering MPT identified by M2;

(8) altering survival of a cell comprising contacting a cell with (VI);

(9) altering (M3) MPT comprising contacting a cell with (VI);

(10) preparing (III) or (IV) comprising culturing a host cell containing (I) or (II) respectively and recovering (III) or (IV) from the culture;

(11) a kit (VII) for screening for agents that alter MPT comprising:

(a) an isolated CypD polypeptide or its derivative;

(b) an isolated ANT polypeptide or its derivative; and

(c) a detection reagent that specifically binds to (a) or (b);

and

(12) a kit (VIII) for screening for agents that alter MPT comprising a host cell, (I) and (II).

ACTIVITY - Neuroprotective; nootropic; antidiabetic; antiparkinsonian; ophthalmological; antipsychotic; cerebroprotective; cytostatic; antipsoriatic; auditory; anticonvulsant. No supporting data is given.

MECHANISM OF ACTION - Alter mitochondrial membrane permeability transition; alter interaction between mitochondrial adenine nucleotide translocator and cyclophilin D.

USE - The methods are useful for screening for agents that alter MPT and/or cell survival (claimed). These agents (VI) are useful for the prevention or treatment of diseases associated with altered mitochondrial function or dysfunctional cell survival, such as Alzheimer's disease, diabetes mellitus, Parkinson's disease, Huntington's disease, dystonia, Leber's hereditary optic neuropathy, schizophrenia, mitochondrial encephalopathy, lactic acidosis, stroke, cancer, psoriasis, hyperproliferative disorders, mitochondrial diabetes, deafness and myoclonic epilepsy ragged red fiber syndrome.  
Dwg.0/14

L6 ANSWER 19 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2001-601491 [68] WPIDS  
CROSS REFERENCE: 2002-381949 [31]  
DOC. NO. CPI: C2001-178227  
TITLE: Novel nucleic acid molecule (a homing **vector**  
) useful for generating recombinant animal virus e.g.  
adenovirus, retrovirus, which are useful in gene  
therapy techniques to provide a protein of interest  
to the subject.  
DERWENT CLASS: B04 D16  
INVENTOR(S): RICHARDS, C A; WEINER, M P  
PATENT ASSIGNEE(S): (GLAX) GLAXO WELLCOME INC  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6291214	B1	20010918	(200168)*		35

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
-----			

Searcher : Shears 571-272-2528

US 6291214	B1 Provisional	US 1998-84936P	19980511
		US 1999-309382	19990510

PRIORITY APPLN. INFO: US 1998-84936P 19980511; US  
1999-309382 19990510

AN 2001-601491 [68] WPIDS

CR 2002-381949 [31]

AB US 6291214 B UPAB: 20020701

NOVELTY - Isolated nucleic acid (I) (a homing **vector**) to generate recombinant animal virus (av) having av polynucleotide (II) which has viral elements for recombinant viral production in host cell upon contact with viral **replication** proteins (vrp), a transposon target site within (II), located so that it does not prevent av production in host cell upon contact with vrp, and origin of **replication**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a cell comprising (I);

(2) a kit for producing a recombinant animal virus comprising (I) and a **vector** for transposition of an exogenous nucleic acid, comprising:

(a) a transposon that recognizes the transposon target site, and has a cloning site between its left and right ends;

(b) a bacterial origin of **replication** positioned outside of a region encompassed by the left and right ends of the transposon; and

(c) a selectable marker;

(3) a **vector** (II) (a **transfer vector**) for transposition of an exogenous **nucleic acid**, comprising:

(a) a transposon having:

(i) a cloning site between its left and right ends;

(ii) a bacterial origin of **replication** positioned outside of a region encompassed by the left and right ends of the transposon;

(iii) a selectable marker; and

(iv) a promoter outside the region encompassed by the left and right ends of the transposon, positioned to promote expression of an exogenous polynucleotide inserted in the cloning site; or

(b) a transposon having:

(i) a cloning site between its left and right ends;

(ii) a bacterial origin of **replication** positioned outside of a region encompassed by the left and right ends of the transposon;

(iii) a selectable marker; and

(iv) a exogenous polynucleotide inserted in the cloning site, where the exogenous polynucleotide lacks a promoter; and

(4) a cell comprising (II).

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy; antisense therapy.

No biological data is given.

USE - (I) is useful for generating a recombinant animal virus such as adenovirus, retrovirus, adeno-associated virus, preferably, adenovirus Ad2 or (more preferably, Ad5) which have the E1 and/or E3 regions deleted from the adenoviral polynucleotide. (I) and (II) are useful for producing an recombinant animal virus which involves contacting (I) in a cell under conditions suitable for transposition with (II) which comprises a transposon that recognizes the transposon

target site, an exogenous polynucleotide inserted between left and right ends of transposon, a bacterial origin of **replication** positioned outside of a region encompassed by the left and right ends of the transposon, and selectable marker, so that a transposition product is produced. The transposition product is **transferred** into a cell comprising any necessary vrp, and thereby producing the virus. Preferably, (I) used in the method comprises a promoter inserted in a region out side of viral polynucleotide and positioned to promote expression of the exogenous polynucleotide that lacks a promoter. Preferably, a functional ATG codon within the transposon has been rendered non-functional. (II) used in the method further comprises a promoter outside the region encompassed by left and right ends of the transposon, positioned to promote expression of the exogenous polynucleotide inserted in the cloning site. Preferably, (II) comprises two or more promoters derived from two or more organisms. Optionally, (II) further comprises a promoter (a cytomegalovirus promoter) within the region encompassed by left and right ends of the transposon (all claimed). The recombinant animal viruses comprising exogenous **nucleic acid** sequences, are administered to a cell, tissue, organ or subject of interest, for monitoring expression of the **gene** of interest. The administration can provide a protein to a subject in need of a protein, or an antisense **nucleic acid** to inhibit expression of a **gene**.

ADVANTAGE - The method for generating recombinant animal viruses using homing **vector** and **transfer vector** is simple, rapid and efficient, accommodates sizable **DNA** inserts, and generates truly clonal viruses. The homing **vector** system is easily adapted to allow subcloning into a single universal **transfer vector** that can be used to transpose **genes** into any of several different expression systems, thus facilitating cost-effective subcloning into a variety of **vectors** including adenoviral, retroviral, adeno-associated viral **vectors**, etc. Thus, the method allows better and additional uses of adenovirus, retrovirus, and adeno-associated virus. The method can be applied to any desired animal virus to allow greater exogenous inserts to be **transferred** by viral **vectors** and to provide simpler production of virus once an exogenous **gene** of choice has been cloned into (II). The homing **vector** system for generating recombinant adenoviruses saves about 20 days over the 44 day conventional method of homologous recombination in 293 cells, and eliminates any risk of viruses being contaminated with **replication** competent adenovirus resulting from recombinogenic viral **DNA**. Also the system allows one to quickly exchange promoters in the absence of any in vitro subcloning. Dwg.0/7

L6 ANSWER 20 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2001-259847 [27] WPIDS  
 DOC. NO. NON-CPI: N2001-185444  
 DOC. NO. CPI: C2001-078496  
 TITLE: New **vector** free from non-essential elements, useful for transforming cells for protein production and for preparing transgenic plants.  
 DERWENT CLASS: B04 C06 D16 P13  
 INVENTOR(S): COMEAU, D; GRUBER, V  
 PATENT ASSIGNEE(S): (MERI-N) MERISTEM THERAPEUTICS; (MERI-N) MERISTEM THERAPEUTICS SA; (COME-I) COMEAU D; (GRUB-I) GRUBER V  
 COUNTRY COUNT: 95

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2798139	A1	20010309	(200127)*		180
WO 2001018192	A2	20010315	(200127)	EN	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW					
MZ NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK					
DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR					
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO					
RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000067177	A	20010410	(200137)		
EP 1144608	A2	20011017	(200169)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL					
PT RO SE SI					
CN 1335891	A	20020213	(200233)		
JP 2003509027	W	20030311	(200319)		201
AU 762960	B	20030710	(200355)		
US 2003175976	A1	20030918	(200362)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2798139	A1	FR 1999-11112	19990903
WO 2001018192	A2	WO 2000-IB1243	20000904
AU 2000067177	A	AU 2000-67177	20000904
EP 1144608	A2	EP 2000-954825	20000904
		WO 2000-IB1243	20000904
CN 1335891	A	CN 2000-802418	20000904
JP 2003509027	W	WO 2000-IB1243	20000904
		JP 2001-522403	20000904
AU 762960	B	AU 2000-67177	20000904
US 2003175976	A1	US 2001-845064	20010427

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000067177	A Based on	WO 2001018192
EP 1144608	A2 Based on	WO 2001018192
JP 2003509027	W Based on	WO 2001018192
AU 762960	B Previous Publ.	AU 2000067177
	Based on	WO 2001018192

PRIORITY APPLN. INFO: FR 1999-11112 19990903

AN 2001-259847 [27] WPIDS

AB FR 2798139 A UPAB: 20010518

NOVELTY - 'Clean' synthetic **vector** (A) containing only those elements essential for its functionality and **transgenesis** of a cell (especially a plant cell) consisting of at most 1 origin of **replication** (ori), at most 1 sequence (I) encoding a selection agent and a trfA locus (II), encoding a protein that increases the level of plasmid **replication**, is new.

DETAILED DESCRIPTION - (A) particularly contains an RK2 ori, especially oriV from pRK2 of Escherichia coli with a broad host range; an antibiotic resistance gene, especially nptIII conferring resistance to kanamycin in bacteria, and a (II) from pRK2 encoding the proteins

P285 and P382.

INDEPENDENT CLAIMS are also included for the following:

- (a) 22 specific nucleic acid sequences (B), the linear forms of (A), all reproduced in the specification (3508-10003 base pairs (bp));
- (b) transgenic plants that have (A) or (B) integrated stably into the genome;
- (c) propagules of the plants of (b);
- (d) cells containing (A) or (B);
- (e) method for expressing a nucleic acid or gene, to produce a polypeptide, by transforming a cell with (A) or (B); and
- (f) method for producing a transgenic plant or its propagules by transformation with (A) or (B).

USE - (A) are used to prepare transgenic plants and transformed host cells for production of a heterologous proteins, e.g. insulin, interferon, lipase, blood proteins and anti-inflammatory agents.

ADVANTAGE - (A) are relatively small, contain no irrelevant components, **replicate** to a higher level than known **vectors**, and can be tailored for particular applications with better control over the level of protein expression.

Dwg.0/22

L6 ANSWER 21 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2001-245930 [26] WPIDS  
 DOC. NO. CPI: C2001-074114  
 TITLE: New nucleic acid from phage phiCh1, used to create **vectors** for expressing proteins and polymers in halophilic Archaea.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): BARANYI, U; KLEIN, R; WITTE, A  
 PATENT ASSIGNEE(S): (LUBI-I) LUBITZ W  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19937719	A1	20010222	(200126)*		72

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19937719	A1	DE 1999-1037719	19990810

PRIORITY APPLN. INFO: DE 1999-19937719 19990810

AN 2001-245930 [26] WPIDS

AB DE 19937719 A UPAB: 20010515

NOVELTY - Isolated nucleic acid (I), containing at least one of 86 tabulated open reading frames (ORF), from the genome of phage phiCh1 of *Natrialba magadii*, at least one expression regulatory element for the ORF and/or the origin of **replication** (ori) of phi Ch1, is new. The genome of phi Ch1 is a combination of 48300 and 10198 base pair sequences (S1 and S2), both fully defined in the specification.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) recombinant **vector** (RV1) containing at least one copy of (I);
- (2) recombinant **vector** (RV2) containing the ori of phi

Ch1;

- (3) cell transformed with RV1 or RV2;
- (4) isolated polypeptide (II) encoded by (I);
- N. magadii cells free from the prophage of phi Ch1;
- (5) phage variants having lytic properties different from those of wild-type phi Ch1 and having genomic sequences at least 70 % homologous with the phi Ch1 genome;
- (6) use of phi Ch1 as **gene transfer vector**; and
- (7) use of halophilic Archaea for production of proteins and other polymers.

USE - **Vectors** that contain (I) are used to transform halophilic Archaea, specifically N. magadii, for production of proteins and other polymers (e.g. poly(hydroxybutyrate)).

ADVANTAGE - **Vectors** containing (I) allow controlled, inducible expression of compounds in Archaea.  
Dwg.0/8

L6 ANSWER 22 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-412085 [35] WPIDS  
 DOC. NO. NON-CPI: N2000-308055  
 DOC. NO. CPI: C2000-124877  
 TITLE: Piwi family nucleic acids, polypeptides, and antibodies, useful in gene therapy of diseases such as cancer and in various research and diagnostic applications.  
 DERWENT CLASS: B04 C06 D16 P14  
 INVENTOR(S): LIN, H  
 PATENT ASSIGNEE(S): (UYDU-N) UNIV DUKE; (LINH-I) LIN H  
 COUNTRY COUNT: 23  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000032039	A1	20000608	(200035)*	EN	197
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU CA JP US					
AU 2000017508	A	20000619	(200044)		
EP 1170992	A1	20020116	(200207)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
US 2002076797	A1	20020620	(200244)		
US 6723534	B2	20040420	(200427)		
US 2004248175	A1	20041209	(200481)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000032039	A1	WO 1999-US28764	19991203
AU 2000017508	A	AU 2000-17508	19991203
EP 1170992	A1	EP 1999-960653	19991203
		WO 1999-US28764	19991203
US 2002076797	A1 Provisional	US 1998-110901P	19981204
	CIP of	WO 1999-US28764	19991203
		US 2001-873737	20010604
US 6723534	B2 Provisional	US 1998-110901P	19981204
	Cont of	WO 1999-US28764	19991203
		US 2001-873737	20010604
US 2004248175	A1 Provisional	US 1998-110901P	19981204

Searcher : Shears 571-272-2528

CIP of	WO 1999-US28764	19991203
Div ex	US 2001-873737	20010604
	US 2004-827996	20040420

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000017508	A Based on	WO 2000032039
EP 1170992	A1 Based on	WO 2000032039
US 2004248175	A1 Div ex	US 6723534

PRIORITY APPLN. INFO: US 1998-110901P 19981204; US  
 2001-873737 20010604; US  
 2004-827996 20040420

AN 2000-412085 [35] WPIDS

AB WO 200032039 A UPAB: 20000725

NOVELTY - Isolated piwi proteins comprising 843 (P1), 862 (P2), and 861 (P3) amino acid sequences (and variants of P1-P3), encoded by 3047 (N1), 4064 (N2) and 3472 (N3) base pair (bp) nucleic acids, respectively, (all sequences given in the specification), are new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated antibody binding to P1-P3;
- (2) a hybridoma cell line which produces the antibody of (1);
- (3) the nucleic acids N1-N3 encoding P1-P3;
- (4) a recombinant host cell (C1) comprising N1-N3;
- (5) a method (M1) for preparing P1-P3 comprising culturing C1
- (6) a method (M2) of detecting an RNA in a sample that encodes the piwi family polypeptide encoded by N1-N3 comprising contacting the sample with N1-N3 and detecting the presence of a duplex;
- (7) a method (M3) of producing an antibody immunoreactive with a piwi family polypeptide;
- (8) an antibody produced by M3;
- (9) a method (M4) of detecting a piwi family polypeptide comprising immunoreacting the polypeptide with the antibody of (8) and detecting the conjugate;
- (10) a method (M5) of detecting a messenger RNA transcript that encodes a piwi family polypeptide comprising hybridizing the messenger RNA transcript with N1-N3 and detecting duplex formation;
- (11) an assay kit for detecting a piwi family polypeptide and antibody to the polypeptide;
- (12) a method (M6) of screening candidate substances for the ability to modulate piwi family biological activity comprising:
  - (a) establishing replicate test and control samples that comprise a biologically active piwi family polypeptide;
  - (b) administering a candidate substance to the test sample but not the control sample;
  - (c) measuring piwi family biological activity in the test and the control samples; and
  - (d) determining that the candidate substance modulates piwi family biological activity if the activity measured for the test sample is greater or less than the control sample;
- (13) a recombinant cell (C2) for use in M6;
- (14) a method (M7) of modulating piwi family polypeptide activity in a subject;
- (15) a method (M8) of culturing a primitive cell using a piwi polypeptide;
- (16) a transgenic or chimeric non-human animal having a piwi

nucleic acid incorporated into its genome;

(17) a (M9) method of altering the phenotype of an embryonic animal, the method comprising:

(a) providing a recombinant primitive cell comprising a nucleic acid encoding a piwi family polypeptide;

(b) transfecting the recombinant primitive cell with a nucleic acid encoding a biologically active polypeptide; and

(c) transferring the transfected primitive cells into an embryo to confer expression of the biologically active polypeptide, where the phenotype of the embryo is altered; and

(18) a method (M10) of recovering a protein from a transgenic or chimeric non-human animal.

ACTIVITY - Cytostatic.

No biological data given.

MECHANISM OF ACTION - Gene therapy.

USE - The piwi family nucleic acids and polypeptides are used in gene therapy of diseases such as cancer and also in various research and diagnostic applications.

Dwg.0/10

L6 ANSWER 23 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-387606 [33] WPIDS  
 DOC. NO. CPI: C2000-117626  
 TITLE: Composition for use in cloning or subcloning one or more desired nucleic acid molecules comprises comprising at least one ribosomal protein and at least one recombination protein.  
 DERWENT CLASS: B04 C06 D16  
 INVENTOR(S): FLYNN, E; GERARD, G F; HU, A W  
 PATENT ASSIGNEE(S): (LIFE-N) LIFE TECHNOLOGIES INC; (INVI-N) INVITROGEN CORP  
 COUNTRY COUNT: 91  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000029000	A1	20000525	(200033)*	EN	112
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL QA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
AU 2000017216	A	20000605	(200042)		
EP 1131078	A1	20010912	(200155)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
US 2003157662	A1	20030821	(200356)		

# APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000029000	A1	WO 1999-US26871	19991112
AU 2000017216	A	AU 2000-17216	19991112
EP 1131078	A1	EP 1999-960316	19991112
		WO 1999-US26871	19991112
US 2003157662	A1 Provisional	US 1998-108324P	19981113
	Div ex	US 1999-438358	19991112
		US 2002-292838	20021113

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000017216	A Based on	WO 2000029000
EP 1131078	A1 Based on	WO 2000029000

PRIORITY APPLN. INFO: US 1998-108324P 19981113; US  
 1999-438358 19991112; US  
 2002-292838 20021113

AN 2000-387606 [33] WPIDS

AB WO 200029000 A UPAB: 20000712

NOVELTY - A composition (I) for use in cloning or subcloning one or more desired nucleic acid molecules by recombinational cloning, comprising at least one ribosomal protein and at least one recombination protein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) a method for cloning or subcloning one or more desired nucleic acid molecules comprising:
  - (a) forming a combination by combining in vitro or in vivo:
    - (i) one or more Insert Donor molecules comprising one or more desired nucleic acid segments flanked by at least two recombination sites which do not recombine with each other;
    - (ii) one or more **Vector** Donor molecules comprising at least two recombination sites which do not recombine with each other;
    - (iii) at least one recombination protein; and
    - (iv) at least one ribosomal protein; and
  - (b) incubating the combination to **transfer** one or more of the desired segments into one or more of the **Vector** Donor molecules, producing one or more desired Product **nucleic acid** molecules;
- (2) a method for recombinational cloning of one or more desired nucleic acid molecules comprising:
  - (a) forming a mixture by mixing one or more of the desired nucleic acid molecules with one or more **vectors** and with (I); and
  - (b) incubating the mixture to **transfer** the one or more desired **nucleic acid** molecules into one or more of the **vectors**;
- (3) a method for enhancement of recombinational cloning, comprising contacting a nucleic acid molecule with one or more ribosomal proteins and with one or more recombination proteins;
- (4) a DNA molecule produced by the method of (2);
- (5) a host cell comprising the DNA molecule of (4); and
- (6) a kit for use in recombinational cloning of a nucleic acid molecule, the kit comprising at least one ribosomal protein and at least one recombination protein.

USE - The composition and methods are useful for changing **vectors**, operably linking genes to regulatory genetic sequences, constructing genes for fusion proteins, changing copy number, changing **replicons**, cloning into phages and cloning (such as polymerase chain reaction products, genomic DNAs and cDNAs).  
 Dwg.0/21

L6 ANSWER 24 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-205672 [18] WPIDS  
 CROSS REFERENCE: 2000-205771 [18]; 2000-205772 [18]

DOC. NO. NON-CPI: N2000-153021  
 DOC. NO. CPI: C2000-063452  
 TITLE: Modified green fluorescent protein with altered spectral properties compared to the wild type protein, used in assay methods, especially using fluorescence resonance energy transfer.  
 DERWENT CLASS: B04 D16 S03  
 INVENTOR(S): BASTIAENS, P; GELEY, S; PEPPERKOK, R  
 PATENT ASSIGNEE(S): (IMCR) IMPERIAL CANCER RES TECHNOLOGY LTD; (IMCR) IMPERIAL CANCER RES TECHNOLOGY  
 COUNTRY COUNT: 87  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000008054	A1	20000217	(200018)*	EN	39
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9954291	A	20000228	(200030)		
EP 1102791	A1	20010530	(200131)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2002522040	W	20020723	(200263)		36

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000008054	A1	WO 1999-GB2596	19990806
AU 9954291	A	AU 1999-54291	19990806
EP 1102791	A1	EP 1999-940293	19990806
		WO 1999-GB2596	19990806
JP 2002522040	W	WO 1999-GB2596	19990806
		JP 2000-563686	19990806

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9954291	A Based on	WO 2000008054
EP 1102791	A1 Based on	WO 2000008054
JP 2002522040	W Based on	WO 2000008054

PRIORITY APPLN. INFO: GB 1998-17229 19980808; GB  
 1998-17225 19980808; GB  
 1998-17227 19980808

AN 2000-205672 [18] WPIDS  
 CR 2000-205771 [18]; 2000-205772 [18]  
 AB WO 200008054 A UPAB: 20021001

NOVELTY - A polypeptide (I) comprising the functional portion of a green fluorescent protein (GFP), but with the mutations V-A at position 163, S-G at position 175, I-T at position 167, F-L at position 64, S-T at position 65, S-A at position 72 and T-Y at position 203, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for

the following:

(1) a polypeptide with a 240 residue amino acid sequence, fully defined in the specification, corresponding to a red-shift mutant of MmGFP5, called YFP5;

(2) a polypeptide comprising at least residues 7-229 of GFP and containing the amino acid substitutions of the novelty;

(3) a polynucleotide (II) encoding (I) or the polypeptide of (1) or (2);

(4) an expression **vector** encoding (I) or the polypeptide of (1) or (2); and

(5) a host cell comprising (II) or the **vector** of (3);

USE - The modified green fluorescent protein (GFP) of the invention is used as a reporter molecule in biological assays, especially in assays utilizing fluorescence resonance energy transfer (FRET), used to detect biologically active substances. The protein is also useful as an acceptor molecule. (I) or the polypeptide of (1) can be used as a reporter molecule in a cell, and (II) or the **vector** of (3) can be used to express a reporter molecule in a cell (claimed).

ADVANTAGE - The modified green fluorescent protein of the invention has improved properties, especially improved spectral properties, for use in biological systems.  
Dwg.0/5

L6 ANSWER 25 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-086973 [07] WPIDS  
 CROSS REFERENCE: 2003-829570 [77]  
 DOC. NO. CPI: C2000-024257  
 TITLE: Novel heat shock procedure and recombinant viruses useful for diagnostic research studies and as therapeutic or prophylactic vaccines.  
 DERWENT CLASS: B04 C06 D16  
 INVENTOR(S): KOVACS, G R; PARKS, C L; SIDHU, M S; UDEM, S A  
 PATENT ASSIGNEE(S): (AMCY) AMERICAN CYANAMID CO; (AMHP) WYETH HOLDINGS CORP  
 COUNTRY COUNT: 85  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9963064	A1	19991209	(200007)*	EN	75
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9944144	A	19991220	(200021)		
BR 9910929	A	20010220	(200114)		
EP 1090108	A1	20010411	(200121)	EN	
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE					
CN 1303426	A	20010711	(200159)		
MX 2000011420	A1	20010401	(200171)		
KR 2001052498	A	20010625	(200173)		
JP 2002517189	W	20020618	(200242)		74
AU 761234	B	20030529	(200346)		
US 6673572	B2	20040106	(200411)		

APPLICATION DETAILS:

Searcher : Shears 571-272-2528

PATENT NO	KIND	APPLICATION	DATE
WO 9963064	A1	WO 1999-US12292	19990603
AU 9944144	A	AU 1999-44144	19990603
BR 9910929	A	BR 1999-10929	19990603
		WO 1999-US12292	19990603
EP 1090108	A1	EP 1999-927175	19990603
		WO 1999-US12292	19990603
CN 1303426	A	CN 1999-806717	19990603
MX 2000011420	A1	MX 2000-11420	20001121
KR 2001052498	A	KR 2000-713629	20001201
JP 2002517189	W	WO 1999-US12292	19990603
		JP 2000-552260	19990603
AU 761234	B	AU 1999-44144	19990603
US 6673572	B2 Provisional	US 1998-87800P	19980603
	Cont of	WO 1999-US12292	19990603
	Cont of	US 2001-701671	20010228
		US 2002-261961	20021001

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9944144	A Based on	WO 9963064
BR 9910929	A Based on	WO 9963064
EP 1090108	A1 Based on	WO 9963064
JP 2002517189	W Based on	WO 9963064
AU 761234	B Previous Publ.	AU 9944144
	Based on	WO 9963064

PRIORITY APPLN. INFO: US 1998-87800P 19980603; US  
2001-701671 20010228; US  
2002-261961 20021001

AN 2000-086973 [07] WPIDS

CR 2003-829570 [77]

AB WO 9963064 A UPAB: 20040331

NOVELTY - A heat shock procedure for increased recovery of recombinant Mononegavirales virus, is new.

DETAILED DESCRIPTION - A method for producing a recombinant Mononegavirales virus comprises: in at least one host cell, conducting transfection, in media, of a rescue composition which comprises: a transcription **vector** comprising an isolated **nucleic** acid molecule which comprises a polynucleotide sequence encoding a genome or anti-genome of a non-segmented, negative-sense, single stranded RNA virus of the Mononegavirales order; and at least one expression **vector** which comprises one or more isolated **nucleic** acid molecule(s) encoding the trans-acting proteins necessary for encapsidation, transcription and **replication**; under conditions sufficient to permit the co-expression of the **vectors** and the production of the recombinant virus; and heating the transfected rescue composition to an effective heat shock temperature under conditions sufficient to increase the recovery of the recombinant virus; or **transferring** the transfected rescue composition onto at least one layer of plaque expansion cells.

INDEPENDENT CLAIMS are also included for the following:

- (1) a recombinant virus prepared by a method as above; and
- (2) a composition comprising a recombinant virus prepared as above and a pharmaceutically acceptable carrier.

ACTIVITY - Anti-viral.

MECHANISM OF ACTION - Vaccine.

USE - The recombinant viruses formed by the methods are useful as tools in diagnostic research studies or as therapeutic or prophylactic vaccines. The heat shock procedure can be used to improve the efficiency of the procedure used to produce virus-like particles by packaging synthetic influenza-like CAT:RNA mini-genome in the COS-1 cells, by vaccinia-T7 polymerase expressing cDNA clones of 10 influenza A virus-coded proteins. The method can also be used to improve efficiency of a helper independent system for the rescue of a segmented, negative strand RNA genome of Bunyamwera bunyavirus.

ADVANTAGE - The ability to obtain **replicating** virus from rescue may diminish as the polynucleotide encoding the native genome and anti-genome is increasingly modified. The methods of the invention improve the likelihood of recombinant virus rescue. An advantage of using of DNA synthesis inhibitors during a genetic rescue event is that there should be very little or no contamination of the rescued RNA virus with a modified helper virus. Heat shock temperatures above the standard temperature for performing rescue of a recombinant virus increase the recovery of the desired recombinant virus over the level of recovery of recombinant virus when rescue is performed in the absence of the increase in temperature.

Dwg.0/6

L6 ANSWER 26 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1999-508654 [42] WPIDS  
 DOC. NO. CPI: C1999-148634  
 TITLE: Producing kinases with increased activity on  
 nucleoside and nucleotide analogs, used to improve  
 conversion of prodrugs, e.g. AZT, to active form.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): GOODY, R S; KONRAD, M; LAVIE, A; REINSTEIN, J;  
 SCHLICHTING, I  
 PATENT ASSIGNEE(S): (PLAC) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN  
 COUNTRY COUNT: 22  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9941404	A2	19990819	(199942)*	EN	83
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: CA JP US					
EP 1060259	A2	20001220	(200105)	EN	
R: AT BE CH DE DK FR GB IT LI NL SE					
JP 2002503479	W	20020205	(200212)		96

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9941404	A2	WO 1999-EP945	19990212
EP 1060259	A2	EP 1999-906232	19990212
		WO 1999-EP945	19990212
JP 2002503479	W	WO 1999-EP945	19990212
		JP 2000-531585	19990212

FILING DETAILS:

PATENT NO	KIND	PATENT NO
	Searcher	: Shears 571-272-2528

-----  
 EP 1060259            A2 Based on            WO 9941404  
 JP 2002503479        W Based on            WO 9941404

PRIORITY APPLN. INFO: EP 1998-102546            19980213

AN 1999-508654 [42] WPIDS

AB WO 9941404 A UPAB: 19991014

NOVELTY - Producing polypeptide (I) with (enhanced) kinase activity for a nucleoside or nucleotide analog (A) by substituting, adding or deleting in a protein having kinase activity, at least one amino acid:  
 (a) at X2 or X3 position of the consensus sequence GX1X2X3X4GK of the P-loop;

(b) in the LID region, and/or

(c) at position 105 of human thymidylate kinase, or the corresponding position in other kinases.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) polynucleotides (II) encoding (I);

(2) **vector** containing (II);

(3) host cells containing the **vector**;

(4) recombinant production of (I) by culturing the cells;

(5) antibodies (Ab) specific for (I);

(6) composition containing (I), (II) or the **vector** of (2) (or a prokaryotic protein with similar kinase activity, or related nucleic acid or **vector**) and optionally an (A) and/or carrier;

(7) a kit containing (I), (II), the **vector** of (2) or Ab, optionally also an (A);

(8) identifying an inhibitor of nucleoside/nucleotide kinases by:

(a) contacting (I) or a cell expressing it, in the presence of compounds capable of providing a detectable signal in response to kinase activity, with a nucleoside or nucleotide analog to be screened, and

(b) detecting presence/absence of a signal generated from the kinase activity of (I), where the presence of signal indicates the inhibitory activity;

(9) identifying a nucleoside- or nucleotide-based prodrug by:

(a) as in (8a)

(b) detecting presence/absence of a signal generated from the kinase activity of (I), where the signal presence indicates a putative prodrug, and

(10) compounds identified by methods (8) and (9).

ACTIVITY - Anticancer; antiviral.

MECHANISM OF ACTION - (I) generate cytotoxic nucleotide analogs from their prodrugs, by phosphorylation.

USE - (I), also nucleic acid (II) encoding them, **vectors** containing (II), and unmodified **prokaryotic** enzymes with similar activities, are used to activate nucleoside/nucleotide analogs or prodrugs, particularly for treating and preventing viral infections (specifically by human immune deficiency virus) and/or cancer. (I), or **cells** expressing them, can also be used:

(a) to identify specific inhibitors and prodrugs, useful for inhibiting viral **replication** and cancer, also diagnostically, and

(b) to prepare nucleoside phosphate analogs and their derivatives, used for therapy and diagnosis.

Antibodies (Ab) against (I) are used for immunoprecipitation and immunolocalization; for detecting (I), e.g. in recombinant organisms, and for identifying compounds that interact specifically with (I).

(II), or **vectors** expressing it, can be used to generate transgenic animals.

ADVANTAGE - Increasing the kinase activity of (I) results in higher concentrations of the active form of the therapeutic analog (specifically AZT-triphosphate: AZT = 3'-azido-3-deoxythymidine) and thus a greater therapeutic effect, while reducing the concentration of the toxic monophosphate intermediate. (I) may have catalytic activity for phosphorylation of AZT-monophosphate 300 times that of the wild-type human enzyme.

Dwg.0/5

L6 ANSWER 27 OF 43 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:611524 SCISEARCH

THE GENUINE ARTICLE: 342HA

TITLE: Non-viral amplification systems for **gene transfer: Vectors** based on alphaviruses

AUTHOR: Smerdou C (Reprint); Liljestrom P

CORPORATE SOURCE: Karolinska Inst, Ctr Microbiol & Tumor Biol, Box 280, S-17177 Stockholm, Sweden (Reprint); Karolinska Inst, Ctr Microbiol & Tumor Biol, S-17177 Stockholm, Sweden; Swedish Inst Infect Dis Control, Dept Vaccine Res, S-17182 Solna, Sweden

COUNTRY OF AUTHOR: Sweden

SOURCE: CURRENT OPINION IN MOLECULAR THERAPEUTICS, (APR 1999) Vol. 1, No. 2, pp. 244-251.  
ISSN: 1464-8431.

PUBLISHER: PHARMAPRESS LTD, MIDDLESEX HOUSE, 34-42 CLEVELAND ST, LONDON W1P 6LB, ENGLAND.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 53

ENTRY DATE: Entered STN: 2000

Last Updated on STN: 2000

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

AB Non-viral self-**replicating vectors** based on defective viral genomes have been developed for it number of different alphaviruses including Semliki Forest virus (SFV), Sindbis virus (SIN) and Venezuelan equine encephalitis virus (VEE). These **vectors** can be used for gene delivery as naked RNA or DNA. Recombinant alphavirus RNA can be synthesized in vitro from plasmids containing the alphavirus **replicon** under the control of a **prokaryotic** promoter such as SP6 or T7 These self-**replicating** RNAs have been able to induce protective immune responses in vivo, probably due to the high level of expression of the recombinant antigen in the transfected **cells**. However, alphavirus **vectors** based on the direct delivery DNA are probably a better choice due to their higher stability and lower production cost. In these **vectors**, the alphavirus **replicon** is placed under the control of a RNA polymerase II promoter. These **vectors** are more efficient than conventional plasmids in inducing both humoral and cellular immune responses in small animals, allowing the use of significant smaller amounts of DNA for immunization. In addition, due to the transient nature of the alphavirus **replicons**, possible problems associated with DNA integration into host chromosomes are eliminated.

L6 ANSWER 28 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

## DUPLICATE 1

ACCESSION NUMBER: 1998-244365 [22] WPIDS  
 DOC. NO. CPI: C1998-076259  
 TITLE: Conjugative **transfer** intraorganelle  
 expression **vector** - and conjugatively  
**transferring vector** from donor  
 microbe carrying to eukaryote, used in **gene**  
 therapy.  
 DERWENT CLASS: B04 D16  
 PATENT ASSIGNEE(S): (MITK) MITSUI TOATSU CHEM INC  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 10075793	A	19980324	(199822)*		24

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10075793	A	JP 1996-255378	19960906

PRIORITY APPLN. INFO: JP 1996-255378 19960906

AN 1998-244365 [22] WPIDS

AB JP 10075793 A UPAB: 19980604

Conjugative **transfer** intraorganelle expression  
**vector** (I) containing: (1) a **replication** starting  
 point functioned by organelle; (2) a **replication** starting  
 point functioned by the donor microbe; (3) selective marker  
**gene** functioned by organelle; (4) selective marker  
**gene** functioned by the donor microbe; (5) a desired foreign  
**gene** functioned by organelle; and (6) oriT sequence required  
 for the conjugative **transfer** between **procaryote**  
 and eukaryote. Also claimed are: (a) E coli containing (I);  
 conjugatively **transferring** (I) from donor microbe carrying  
 (I) to a eukaryote (which is a host **cell**) using tra  
**gene** and mob **gene** to introduce (I) to the organelle  
 present in the eukaryote; and (c) transformant prepared by (b).  
 USE - (I) can be used in the gene therapy.

Dwg.0/5

L6 ANSWER 29 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1998-447243 [38] WPIDS

DOC. NO. CPI: C1998-135756

TITLE: New Bacillus thuringiensis isolates against sucking  
 insects such as aphid, whitefly and jassid - contain  
 parasporal proteins with pesticidal properties and  
 corresponding genes.

DERWENT CLASS: C05 D16

INVENTOR(S): RIAZUDDIN, S; SHEIKH, R

PATENT ASSIGNEE(S): (RIAZ-I) RIAZUDDIN S; (CALJ) CALGENE LLC; (SHEI-I)  
 SHEIKH R; (CALJ) CALGENE INC

COUNTRY COUNT: 83

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
-----------	------	------	------	----	----

WO 9835046 A1 19980813 (199838)\* EN 21  
 RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL  
 OA PT SD SE SZ UG ZW  
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB  
 GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV  
 MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR  
 TT UA UG US UZ VN YU ZW  
 AU 9860025 A 19980826 (199902)  
 EP 983362 A1 20000308 (200017) EN  
 R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE  
 US 6150156 A 20001121 (200101)  
 MX 9907375 A1 20000401 (200124)  
 JP 2001510334 W 20010731 (200148) 22  
 IN 9800210 I2 20050318 (200555) EN

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9835046	A1	WO 1998-IB169	19980211
AU 9860025	A	AU 1998-60025	19980211
EP 983362	A1	EP 1998-903211	19980211
		WO 1998-IB169	19980211
US 6150156	A Provisional	US 1997-40243P	19970211
		US 1998-21234	19980210
MX 9907375	A1	MX 1999-7375	19990810
JP 2001510334	W	JP 1998-525946	19980211
		WO 1998-IB169	19980211
IN 9800210	I2	IN 1998-KO210	19980209

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9860025	A Based on	WO 9835046
EP 983362	A1 Based on	WO 9835046
JP 2001510334	W Based on	WO 9835046

PRIORITY APPLN. INFO: US 1997-40243P 19970211; US  
 1998-21234 19980210

AN 1998-447243 [38] WPIDS

AB WO 9835046 A UPAB: 19980923

A biologically pure culture (I) of *Bacillus thuringiensis* CAMB 786, 787, 788, 3616 or 3667 (ATCC 55930, 55931, 55932, 55934 or 55935, respectively) is new. Also claimed are: (a) a toxin active against hymenopteran pests, which is produced by (I); (b) a nucleotide sequence encoding (a); (c) a recombinant DNA transfer vector containing (b); (d) a prokaryotic or eukaryotic host into which (c) has been transferred and replicated, and (e) intact cells, intracellularly containing (a), the cells being treated under conditions that prolong their insecticidal activity when applied to the environment of a target insect.

The *Bacillus thuringiensis* isolate CAMB 789, ATCC 55933, is also new. The host is a bacteria, such as *Pseudomonas*, *Azotobacter*, *Erwinia*, *Serratia*, *Klebsiella*, *Rhizobacterium*, *Bacillus*, *Streptomyces*, *Rhodopseudomonas*, *Methylophilus*, *Agrobacterium*, *Acetobacter* or *Alcaligenes*. The host may be from Enterobacteriaceae, Bacillaceae, Rhizobiaceae, Spirillaceae, Lactobacillaceae, Pseudomonadaceae,

Azotobacteraceae or Nitrobacteraceae, or is a lower eukaryote, e.g. Phycomycetes, Ascomycetes or Basidiomycetes. PREFERRED NUCLEOTIDE - (b) has an N-terminal sequence of: M/GPKTNVVEVLNK-VANWN-LYVFL or STKTNVVEVL.

USE - (I), variants, toxic crystals or spores, are used for controlling sucking insects from the family Aphididae (claimed), such as aphid, whitefly and jassid. (I) or variants as above are used in compositions of matter (claimed) together with an insecticide carrier. The spores or crystals of (I) are useful to control hymenopterian pests in various environments.  
Dwg.0/0

L6 ANSWER 30 OF 43 MEDLINE on STN  
 ACCESSION NUMBER: 1998414986 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9735318  
 TITLE: A versatile prokaryotic cloning **vector** with six dual restriction enzyme sites in the polylinker facilitates efficient subcloning into **vectors** with unique cloning sites.  
 AUTHOR: Sage D R; Chillemi A C; Fingerroth J D  
 CORPORATE SOURCE: Division of Infectious Diseases, Dana-Farber Cancer Institute, Boston, Massachusetts 02115, USA.  
 CONTRACT NUMBER: RO1 DE12186 (NIDCR)  
 SOURCE: Plasmid, (1998 Sep) 40 (2) 164-8.  
 Journal code: 7802221. ISSN: 0147-619X.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 OTHER SOURCE: GENBANK-AF067142  
 ENTRY MONTH: 199901  
 ENTRY DATE: Entered STN: 19990202  
 Last Updated on STN: 20000303  
 Entered Medline: 19990115

AB In large and complex **vectors** a single restriction enzyme recognition site may be available for introduction of additional DNA requiring the development of linker fragments to create compatible insertion sites. This technology can be time consuming and costly. We describe the construction of a simple phagemid, pSFI, with a polylinker that contains six pairs of dual, rare-cutting, restriction enzyme recognition sites (NotI, SpeI, EcoRV, PstI, SacII, EagI) with multiple unique sites between each pair. This has permitted rapid subcloning of **DNA** with creation of single flanking restriction enzyme sites. pSFI was used to expedite **transfer** of viral **genes** to a LacZ-inducible expression **vector** and to an adenovirus expression cassette for production of **replication**-defective virus. The use of this phagemid has facilitated complex **vector** manipulations and is a valuable adjunct to the family of multifunctional cloning **vectors**.

L6 ANSWER 31 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1996-354525 [35] WPIDS  
 CROSS REFERENCE: 1995-255058 [33]  
 DOC. NO. CPI: C1996-111753  
 TITLE: New ribozymes which target RNA virus packaging sequences - useful to treat or prevent infection by e.g. HIV-1, feline leukaemia virus or feline immunodeficiency virus.  
 DERWENT CLASS: B04 C06 C07 D16

10/649547

INVENTOR(S): SUN, L; SYMONDS, G P  
 PATENT ASSIGNEE(S): (GENE-N) GENE SHEARS PTY LTD  
 COUNTRY COUNT: 28  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9622368	A1	19960725	(199635)*	EN	108
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA FI JP NO NZ RU SG US VN					
AU 9644275	A	19960807	(199646)		
ZA 9600409	A	19961129	(199702)		106
EP 799309	A1	19971008	(199745)	EN	
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 10513345	W	19981222	(199910)		95
AU 703964	B	19990401	(199925)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9622368	A1	WO 1996-AU22	19960118
AU 9644275	A	AU 1996-44275	19960118
ZA 9600409	A	ZA 1996-409	19960118
EP 799309	A1	EP 1996-900475	19960118
		WO 1996-AU22	19960118
JP 10513345	W	JP 1996-521920	19960118
		WO 1996-AU22	19960118
AU 703964	B	AU 1996-44275	19960118

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9644275	A Based on	WO 9622368
EP 799309	A1 Based on	WO 9622368
JP 10513345	W Based on	WO 9622368
AU 703964	B Previous Publ.	AU 9644275
	Based on	WO 9622368

PRIORITY APPLN. INFO: US 1995-375291 19950118

AN 1996-354525 [35] WPIDS

CR 1995-255058 [33]

AB WO 9622368 A UPAB: 20020613

A novel synthetic non-naturally occurring oligonucleotide (ON) cpd. comprises at least one domain, where each domain comprises nucleotides (NTs) whose sequence defines a conserved catalytic region and NTs whose sequence is capable of hybridising with a predetermined target sequence within a packaging sequence of an RNA virus. Also claimed are: (1) a **transfer vector** comprised of RNA or DNA or a combination, containing a NT sequence which on transcription gives rise to an ON as above having one domain and (2) a **prokaryotic** or eukaryotic **cell** comprising a NT sequence which is, or on transcription gives rise to, an ON as above having one domain.

USE - The ON cpds. can be used to treat RNA viral infections and to protect cells against infection by RNA viruses, e.g. HIV-1 Feline Leukaemia Virus or Feline Immunodeficiency Virus. In partic. a **transfer vector** can be incorporated into an individual's

Searcher : Shears 571-272-2528

cells to protect against HIV infection or to suppress HIV in an AIDS patient (claimed). The treatment can be carried out with an additional agent, e.g. AZT, ddI, ddC, d4t, nevirapine, delavirdine, lamivudine, loviride or saquinavir, to inhibit or eliminate HIV-1 **replication**.

ADVANTAGE - The targeting of the ON cpds. to packaging sequences provides inhibitory effects on the entry of the virus into target cells and, following integration of the provirus into the host genome, production of viral RNA. The ONs also inhibit the translation of viral mRNA into viral proteins and the packaging of viral genomic RNA into virions.

Dwg.0/23

L6 ANSWER 32 OF 43 MEDLINE on STN DUPLICATE 2  
 ACCESSION NUMBER: 96393720 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8800493  
 TITLE: Adenovirus-assisted lipofection: efficient in vitro **gene transfer** of luciferase and cytosine deaminase to human smooth muscle cells.  
 AUTHOR: Kreuzer J; Denger S; Reifers F; Beisel C; Haack K; Gebert J; Kubler W  
 CORPORATE SOURCE: Innere Medizin III, Universitat Heidelberg, Germany.. JOERGKREUZER@KRZMAIL.KRZ.UNI-HEIDELBERG.DE  
 SOURCE: Atherosclerosis, (1996 Jul) 124 (1) 49-60. Journal code: 0242543. ISSN: 0021-9150.  
 PUB. COUNTRY: Ireland  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199612  
 ENTRY DATE: Entered STN: 19970128  
 Last Updated on STN: 19970128  
 Entered Medline: 19961213

AB Smooth muscle cells (SMC) are a central cell type involved in multiple processes of coronary artery diseases including restenosis and therefore are major target cells for different aspects of **gene transfer**. Previous attempts to transfect primary arterial cells using different techniques like liposomes, CaPO4 and electroporation resulted in only low transfection efficiency. The development of recombinant adenoviruses dramatically improved the delivery of foreign genes into different cell types including SMC. However, cloning and identification of recombinants remain difficult and time-consuming techniques. The present study demonstrates that a complex consisting of reporter plasmid encoding firefly luciferase (pLUC), polycationic liposomes and **replication**-deficient adenovirus was able to yield very high in vitro transfection of primary human smooth muscle cells under optimized conditions. The technique of adenovirus-assisted lipofection (AAL) increases **transfer** and expression of plasmid **DNA** in human smooth muscle cells in vitro up to 1000-fold compared to lipofection. To verify the applicability of AAL for **gene transfer** into human smooth muscle cells we studied a **gene** therapy approach to suppress proliferation of SMC in vitro, using the **prokaryotic** cytosine deaminase **gene** (CD) which enables transfected mammalian cells to deaminate 5-fluorocytosine (5-FC) to the highly toxic 5-fluorouracil (5-FU). The effect of a transient CD expression on RNA synthesis was investigated by means of a cotransfection with a RSV-CD expression plasmid and the luciferase reporter plasmid. Western blot analysis

demonstrated high expression of CD protein in transfected SMC. Cotransfected SMC demonstrated two-fold less luciferase activity in the presence of 5-FC (5 mmol/l) after 48 h compared to cells transfected with a non-CD coding plasmid. The data demonstrate that a transient expression of CD could be sufficient to reduce the capacity of protein synthesis in human SMC. This simple and effective in vitro transfection method may also be applicable to in vivo delivery of target genes to the vascular wall to inhibit SMC proliferation.

L6 ANSWER 33 OF 43 MEDLINE on STN DUPLICATE 3  
 ACCESSION NUMBER: 96306657 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8745635  
 TITLE: **Gene transfer** from bacteria to mammalian cells.  
 AUTHOR: Courvalin P; Goussard S; Grillot-Courvalin C  
 CORPORATE SOURCE: Unite des agents antibacteriens, CNRS EP J0058, Paris, France.  
 SOURCE: Comptes rendus de l'Academie des sciences. Serie III, Sciences de la vie, (1995 Dec) 318 (12) 1207-12. Journal code: 8503078. ISSN: 0764-4469.  
 PUB. COUNTRY: France  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199609  
 ENTRY DATE: Entered STN: 19961008  
 Last Updated on STN: 20021030  
 Entered Medline: 19960926

AB Transfer of genetic information between phylogenetically remote bacterial genera [1], from bacteria to yeast [2] and from bacteria to plants [3] by plasmid conjugation has been described. However, direct **DNA transfer** from **prokaryotes** to mammalian **cells** has not yet been demonstrated. Certain bacterial species have evolved the ability to enter mammalian cells by inducing their own internalization [4]. We show that invasive strains of *Shigella flexneri* and *Escherichia coli*, that undergo lysis upon entry into mammalian cells because of impaired cell wall synthesis, can act as stable DNA delivery systems to their host. This direct **gene transfer** is efficient, of broad host cell range and the **replicative** or integrative **vectors** so delivered are stably inherited and expressed by the cell progeny. DNA delivery by abortive invasion of eukaryotic cells by bacteria is of potential interest for stimulation of mucosal immunity and for in vivo or ex vivo gene therapy of human diseases.

L6 ANSWER 34 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1992-299352 [36] WPIDS  
 DOC. NO. CPI: C1992-133529  
 TITLE: New adeno-associated virus-2 hybrid gene **vector** - used to insert foreign DNA into mammalian cells, so that the DNA is susceptible to expression and rescue.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): BERNS, K I; HERMONAT, P L; MUZYCZKA, N; SAMULSKI, R J  
 PATENT ASSIGNEE(S): (UYFL) UNIV FLORIDA RES FOUND INC  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
-----------	------	------	------	----	----

Searcher : Shears 571-272-2528

PATENT NO	KIND	APPLICATION	DATE
US 5139941	A Cont of	US 1985-793543	19851031
		US 1991-785224	19911025

PRIORITY APPLN. INFO: US 1985-793543 19851031; US  
1991-785224 19911025

AB US 5139941 A UPAB: 19931112

The hybrid gene **vector** comprises foreign DNA ligated into an adeno-associated virus-2 (AAV) genome in place of or in addition to the cap, lip or rep coding sequence or in place of or in addition to an AAV DNA sequence excluding the first and last 145 bp, the **vector** being capable of transducing foreign DNA into a mammalian **cell** in the presence of a promoter other than an AAV transcription promoter. The AAV genome is cloned in a **prokaryotic vector** plasmid or bacteriophage **vector** capable of growth in **prokaryotic cells** or yeast plasmid **vector** capable of growth in fungal **cells** and a recombinant AAV hybrid gene **vector** is isolated by transfection of the ligated **vector** into a mammalian **cell**, the AAV genome being the entire AAV viral DNA or a deletion mutant, capable of **replication** upon infection of the mammalian **cell** when complemented in trans by an AAV gene.

USE/ADVANTAGE - The **gene vector** can be used for reliably inserting foreign **DNA** into mammalian cells such that the **transferred** genetic material is stable w.r.t. the loci of insertion and which is susceptible to expression and rescue.

Dwg.0/5

L6 ANSWER 35 OF 43 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation  
on STN DUPLICATE 4

ACCESSION NUMBER: 1993:122318 BIOSIS

DOCUMENT NUMBER: PREV199395066418

TITLE: Conjugal **gene transfer** in filamentous cyanobacteria.

AUTHOR(S): Fatma, Tasneem [Reprint author]; Venkataraman, L. V.

CORPORATE SOURCE: Dep. Bio-Sci., Jamia Millia Islamia, New Delhi 110 025,  
India

SOURCE: Current Science (Bangalore), (1992) Vol. 63, No. 4, pp. 186-192.

CODEN: CUSCAM. ISSN: 0011-3891.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Feb 1993

Last Updated on STN: 27 Feb 1993

AB Though cyanobacterial gene manipulation is very difficult and time consuming than bacteria due to constraints like longer generation time, cryptic genetic material, lack of colony formation (filamentous cyanobacteria). But, the time has come when genetic improvement has become inevitable for the better utilization of biotechnologically important cyanobacteria like *Anabaena*, *Nostoc*, *Oscillatoria*,

Calothrix, Westiellopsis, Spirulina. Cyanobacteria are **prokaryotes** with gram-negative bacteria like **cell** wall and eukaryotes like aerobic photosynthetic apparatus. Cyanobacteria have a high market value as natural therapeutic and colouring substance besides, its conventional use as protein supplement and nitrogen fixers. To bring down the product cost, extensive cyanobacterial genetic manipulations are badly needed. Cyanobacterial microbiologists were handicapped due to lack of reproducible **gene-transfer** in filamentous cyanobacteria till Wolk et al. for the first time reported successful **gene transfer** in Anabaena using shuttle **vector** pVW-1 and its derivatives, broad host range conjugal plasmid RP-4 of incompatibility group (IncP) and Helper plasmid pGS101/pGJ28. The use of these plasmids made the conjugation possible in cyanobacteria. Indeed conjugation is the only technique now available for **gene transfer** in filamentous cyanobacteria, viz, Anabaena, Nostoc, Fremyella, Fischerella. It has opened the way for **gene** manipulation studies in other biotechnologically important filamentous cyanobacteria like Spirulina and Westiellopsis, provided one takes for surety of conjugal contact, degradation of **transferred DNA** from host's (recipients) restriction enzyme digestion, and the **transferred gene** (plasmid) is capable of **replication** or integration into the recipient cell.

L6 ANSWER 36 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1991-268821 [37] WPIDS  
 DOC. NO. CPI: C1991-116520  
 TITLE: New DNA encoding the major mite allergen of Dermatophagoides farinae - is used to treat and diagnose allergy those caused by mites, e.g. bronchial asthma, child-hood asthma, etc..  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): OKUMURA, Y; YAMAKAWA, H; YUUKI, T  
 PATENT ASSIGNEE(S): (ASAK) ASAHI BREWERIES LTD; (TORI) TORII & CO LTD  
 COUNTRY COUNT: 18  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 445971	A	19910911	(199137)*		20
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
AU 9171277	A	19910905	(199143)		
CA 2037333	A	19910904	(199147)		
JP 03254683	A	19911113	(199201)		
AU 640450	B	19930826	(199341)		
JP 2596466	B2	19970402	(199718)		7
US 5798099	A	19980825	(199841)		
US 5876722	A	19990302	(199916)		
CA 2037333	C	19990504	(199936)	EN	
US 5958415	A	19990928	(199947)		
EP 445971	B1	20000503	(200026)	EN	
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69132152	E	20000608	(200034)		
ES 2144994	T3	20000701	(200036)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
	Searcher	: Shears	571-272-2528

EP 445971	A	EP 1991-301669	19910228
JP 03254683	A	JP 1990-50848	19900303
AU 640450	B	AU 1991-71277	19910221
JP 2596466	B2	JP 1990-50848	19900303
US 5798099	A Cont of	US 1991-658596	19910221
		US 1994-288888	19940810
US 5876722	A Cont of	US 1991-658596	19910221
	Cont of	US 1994-288888	19940810
		US 1997-910075	19970812
CA 2037333	C	CA 1991-2037333	19910228
US 5958415	A Cont of	US 1991-658596	19910221
	Div ex	US 1994-288888	19940810
		US 1997-905801	19970812
EP 445971	B1	EP 1991-301669	19910228
DE 69132152	E	DE 1991-632152	19910228
		EP 1991-301669	19910228
ES 2144994	T3	EP 1991-301669	19910228

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 640450	B Previous Publ.	AU 9171277
JP 2596466	B2 Previous Publ.	JP 03254683
US 5958415	A Div ex	US 5798099
DE 69132152	E Based on	EP 445971
ES 2144994	T3 Based on	EP 445971

PRIORITY APPLN. INFO: JP 1990-50848 19900303

AN 1991-268821 [37] WPIDS

AB EP 445971 A UPAB: 19991122

DNA (I) encoding a major mite allergen is new, where (I) encodes at least one part of genetic information from the proteins DerfII of *Dermatophagoides farinea*. The nucleotide sequence of (I) is given in the specification.

Also new are a DNA hydridisable to (I), a **replicationm** or expression **vector** endoing (I), a plasmid contg (I), host cell contg (I), a method for producing DerfII, and the resulting protein and peptide.

The **replication** or expression **vector** has at least one selectable market and at least one restriction enzyme - recognition site lying outside the origin of **replication** and the control or coding regions of the marker **gene**. The plasmid also contains an expression cassette with a **DNA** sequence that enables a **prokaryotic** or eukaryotic host to be stably **transferred**, and derfII to be transcribed and/or translated. The plasmid is pFLI or pLFII. The host **cell** is **prokaryotic** eg *E coli* or eukaryotic eg a yeast.

USE/ADVANTAGE - (I) or the corresponding amino acid sequence are used to treat and diagnose allergic diseases, esp those caused by mites eg bronchial asthma, childhood asthma and atopic dermatitis.

L6 ANSWER 37 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1991-009132 [02] WPIDS

DOC. NO. CPI: C1991-003998

TITLE: *Bacillus thuringiensis* containing DNA encoding lepidopteran-active toxin - use of microorganisms transformed with pest control.

10/649547

DERWENT CLASS: C03 D16  
 INVENTOR(S): PAYNE, J; SICK, A J; PAVNE, J  
 PATENT ASSIGNEE(S): (MYCO) MYCOGEN CORP; (PAYN-I) PAYNE J; (SICK-I) SICK  
 A J  
 COUNTRY COUNT: 19  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 405810	A	19910102	(199102)*		
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
CA 2017186	A	19901227	(199111)		
AU 9057900	A	19910228	(199116)		
ZA 9004632	A	19910626	(199131)		
JP 03224487	A	19911003	(199146)		
US 5126133	A	19920630	(199229)	72	
US 5188960	A	19930223	(199310)	93	
US 5246852	A	19930921	(199339)	73	
EP 405810	B1	19960313	(199615)	EN 17	
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69025808	E	19960418	(199621)		
ES 2084659	T3	19960516	(199627)		
US 5691308	A	19971125	(199802)	29	
US 6096708	A	20000801	(200039)		
US 6573240	B1	20030603	(200339)		
US 2004058860	A1	20040325	(200422)		
US 6737273	B2	20040518	(200433)		
JP 3531872	B2	20040531	(200436)	70	
US 2004194165	A1	20040930	(200465)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 405810	A	EP 1990-306594	19900618
ZA 9004632	A	ZA 1990-4632	19900614
JP 03224487	A	JP 1990-165850	19900626
US 5126133	A	US 1989-371955	19890627
US 5188960	A CIP of	US 1989-371955	19890627
		US 1989-451261	19891214
US 5246852	A Div ex	US 1989-371955	19890627
		US 1991-714413	19910612
EP 405810	B1	EP 1990-306594	19900618
DE 69025808	E	DE 1990-625808	19900618
		EP 1990-306594	19900618
ES 2084659	T3	EP 1990-306594	19900618
US 5691308	A CIP of	US 1989-371955	19890627
	Div ex	US 1989-451261	19891214
	Cont of	US 1992-865168	19920409
	Cont of	US 1994-210110	19940317
		US 1994-356034	19941214
US 6096708	A CIP of	US 1989-371955	19890627
	Div ex	US 1989-451261	19891214
	Cont of	US 1992-865168	19920409
	Cont of	US 1994-210110	19940317
	Cont of	US 1994-356034	19941214
		US 1997-933891	19970919
US 6573240	B1 CIP of	US 1989-371955	19890627
	Div ex	US 1989-451261	19891214

Searcher : Shears 571-272-2528

		Cont of	US 1992-865168	19920409
		Cont of	US 1994-210110	19940317
		Cont of	US 1994-356034	19941214
		Div ex	US 1997-933891	19970919
			US 2000-521344	20000309
US 2004058860	A1	CIP of	US 1989-371955	19890627
		Div ex	US 1989-451261	19891214
		Cont of	US 1992-865168	19920409
		Cont of	US 1994-210110	19940317
		Cont of	US 1994-356034	19941214
		Div ex	US 1997-933891	19970919
		Div ex	US 2000-521344	20000309
			US 2001-837961	20010419
US 6737273	B2	CIP of	US 1989-371955	19890627
		Div ex	US 1989-451261	19891214
		Cont of	US 1992-865168	19920409
		Cont of	US 1994-210110	19940317
		Cont of	US 1994-356034	19941214
		Div ex	US 1997-933891	19970919
		Div ex	US 2000-521344	20000309
			US 2001-837961	20010419
JP 3531872	B2		JP 1990-165850	19900626
US 2004194165	A1	CIP of	US 1989-371955	19890627
		Div ex	US 1989-451261	19891214
		Cont of	US 1992-865168	19920409
		Cont of	US 1994-210110	19940317
		Cont of	US 1994-356034	19941214
		Div ex	US 1997-933891	19970919
		Div ex	US 2000-521344	20000309
		Div ex	US 2001-837961	20010419
			US 2004-825751	20040416

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 5246852	A Div ex	US 5126133
DE 69025808	E Based on	EP 405810
ES 2084659	T3 Based on	EP 405810
US 5691308	A CIP of	US 5126133
	Div ex	US 5188960
US 6096708	A CIP of	US 5126133
	Div ex	US 5188960
	Cont of	US 5691308
US 6573240	B1 CIP of	US 5126133
	Div ex	US 5188960
	Cont of	US 5691308
	Div ex	US 6096708
US 2004058860	A1 CIP of	US 5126133
	Div ex	US 5188960
	Cont of	US 5691308
	Div ex	US 6096708
	Div ex	US 6573240
US 6737273	B2 CIP of	US 5126133
	Div ex	US 5188960
	Cont of	US 5691308
	Div ex	US 6096708
	Div ex	US 6573240
JP 3531872	B2 Previous Publ.	JP 03224487

US 2004194165	A1	CIP of	US 5126133
		Div ex	US 5188960
		Cont of	US 5691308
		Div ex	US 6096708
		Div ex	US 6573240
		Div ex	US 6737273

PRIORITY APPLN. INFO: US 1989-451261	19891214; US
1989-371955	19890627; US
1991-714413	19910612; US
1992-865168	19920409; US
1994-210110	19940317; US
1994-356034	19941214; US
1997-933891	19970919; US
2000-521344	20000309; US
2001-837961	20010419; US
2004-825751	20040416

AN 1991-009132 [02] WPIDS  
AB EP 405810 A UPAB: 19930928

Bacillus thuringiensis (B.t.) PS81 1, having the identifying characteristics of NRRL B-18484, or a mutant of it, pref. an asporogenous and/or phage-resistant mutant, has activity against insect pests of the order Lepidoptera.

Also claimed are (1) four **DNA** sequences (I)-(IV) encoding B.t. toxin (A)-(B); (2) (A)-(B) or a mutant of these, having an unaltered protein sec. structure and/or at least part of the biological activity; (3) a recombinant **transfer vector** comprising all or part of (I)-(IV), pref. **transferred to and replicated in a prokaryotic** or enkaryotic host; (4) a microorganism, pref. *Pseudomonas fluorescens* or *Escherichia coli*, capable of expressing (A)-(B); and (5) intact **cells** of a unicellular microorganism, pref. obtd. by treatment with iodine or other chemical or physical means to prolong the insecticidal activity in the environment, containing (A)-(B).

The DNA sequences of (I)-(IV) and derived amino acid sequences (A)-(B) are given in the specification.

USE/ADVANTAGE - Expression of the toxin gene by a host, results, directly or indirectly, in the intracellular production and maintenance of the pesticide. The microbes can be applied to the situs of lepidopteran insects, e.g., to the rhizosphere, to the phylloplans or to a body of water, where they will proliferate and be ingested by the insects. The B.t. cells may be employed as wettable powders, granules or dusts, by mixing with various inert materials, such as inorganic minerals (phyllosilicates, carbonates, sulphates, phosphates, etc.) or botanical materials (powdered corncobs, rice hulls, walnut shells, etc.).

0/0

ABEQ US 5126133 A UPAB: 19930928

Control of lepidopteran insect pests comprises contacting the pests with bacillus thuringiensis PS81I NRRL B-18484, or its mutants. the mutants are asporogenous and/or phage resistant. Also claimed are a process for controlling soil-inhabiting insect pests using a bait granule contg. PS81I spores or crystals; B. thuringiensis PS81I, NRRL B-18484; and asporogenous and/or phage resistant mutants of PS81I.

USE/ADVANTAGE - As a pesticide against lepidopteran insect pests; the cells are well protected as they have thick walls, are pigmented, have leaf affinity, are not toxic to mammals are attractive to pests for ingestion etc.. Formulations contain 10 power (2) - 10 power (4)

cells/mg.

0/10

ABEQ US 5188960 A UPAB: 19930928

Isolated **DNA** encoding *Bacillus thuringiensis* toxin has specified nucleotide sequence. Also claimed are recombinant **DNA transfer vector** comprising the **DNA**, prokaryotic or eukaryotic host contg. the **vector**, *E. coli* transformed with the **vector** and plasmid pMYC1603.

USE/ADVANTAGE - To control lepidopteran insects in various environments.

0/13

ABEQ US 5246852 A UPAB: 19931123

Nucleic acid (cDNA) that encodes the prodn. of *Bacillus thuringiensis* toxin, and plasmids and expression **vectors** contg. this **DNA** are new. Bacterial host cells (e.g. *Escherichia coli*) have been transformed with these expression **vectors** and then propagated to produce the exogenous protein. The nucleotide sequence of the cDNA and the amino acid sequence of the protein are given.

USE - The toxins are active against *Lepidoptera* insect species, facilitating insect control in crops whilst avoiding environmental pollution.

Dwg.0/10

ABEQ EP 405810 B UPAB: 19960417

*Bacillus thuringiensis* PS81RRI, as available under Accession Number NRRLB-18484.

Dwg.0/0

ABEQ US 5691308 A UPAB: 19980112

*Bacillus thuringiensis* (B.t.) PS81 l, having the identifying characteristics of NRRL B-18484, or a mutant of it, pref. an asporogenous and/or phage-resistant mutant, has activity against insect pests of the order *Lepidoptera*.

Also claimed are (1) four **DNA** sequences (I)-(IV) encoding B.t. toxin (A)-(B); (2) (A)-(B) or a mutant of these, having an unaltered protein sec. structure and/or at least part of the biological activity; (3) a recombinant **transfer vector** comprising all or part of (I)-(IV), pref. **transferred** to and **replicated** in a **prokaryotic** or **eukaryotic** host; (4) a microorganism, pref. *Pseudomonas fluorescens* or *Escherichia coli*, capable of expressing (A)-(B); and (5) intact **cells** of a unicellular microorganism, pref. obtd. by treatment with iodine or other chemical or physical means to prolong the insecticidal activity in the environment, contg. (A)-(B).

The **DNA** sequences of (I)-(IV) and derived amino acid sequences (A)-(B) are given in the specification.

USE/ADVANTAGE - Expression of the toxin gene by a host, results, directly or indirectly, in the intracellular prodn. and maintenance of the pesticide. The microbes can be applied to the situs of lepidopteran insects, e.g., to the rhizosphere, to the phylloplans or to a body of water, where they will proliferate and be ingested by the insects. The B.t. cells may be employed as wettable powders, granules or dusts, by mixing with various inert materials, such as inorganic minerals (phyllosilicates, carbonates, sulphates, phosphates, etc.) or botanical materials (powdered corncobs, rice hulls, walnut shells, etc.).

Dwg.0/1

DOC. NO. CPI: C1989-038739  
 TITLE: Bacillus thuringiensis toxin toxic to dipteran insects - produced by gene isolated from Bacillus thuringiensis var. israelensis strain.  
 DERWENT CLASS: C03 D16  
 INVENTOR(S): GILROY, T E  
 PATENT ASSIGNEE(S): (MYCO) MYCOGEN CORP  
 COUNTRY COUNT: 14  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 308199	A	19890322	(198912)*	EN	13
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
JP 01153095	A	19890615	(198930)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 308199	A	EP 1988-308498	19880914
JP 01153095	A	JP 1988-228909	19880914

PRIORITY APPLN. INFO: US 1987-98359 19870918; US  
 1988-207690 19880616

AN 1989-087579 [12] WPIDS  
 AB EP 308199 A UPAB: 19930923

A toxin, active against dipteran insects, having a specified amino acid sequence or a mutant having the same protein secondary structure or, if the structure is altered, having the same biological activity is claimed. Also claimed are (a) a **DNA** molecule including a nucleotide sequence encoding the amino acid sequence, (b) a **prokaryotic** or eukaryotic host into which the **DNA** as a **DNA transfer vector** has been **transferred and replicated**, (c) E. coli strain BB3 (pBT13, 82-5), NRRL B-18252 and (d) treated, intact unicellular microorganism **cells** containing an intracellular toxin which is the result of expression of a Bacillus thuringiensis toxin **gene** which codes for a toxin having the specified amino acid sequence, where treatment prolongs the insecticidal activity when the **cells** are applied to the environment of a target insect. These **cells** may be treated with iodine.

USE - The novel toxin gene is toxic to dipteran insects, eg. mosquitoes. It can be cloned into microorganisms and used to control the insects in various environments, e.g. plants, soil or water.  
 0/0

L6 ANSWER 39 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1988-072528 [11] WPIDS  
 DOC. NO. CPI: C1988-032564  
 TITLE: Hepatitis B viral antigens production - by infecting insects or insect cells with recombinant baculovirus.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): KANG, C Y  
 PATENT ASSIGNEE(S): (BISH-I) BISHOP D H L  
 COUNTRY COUNT: 14  
 PATENT INFORMATION:

10/649547

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 260090	A	19880316	(198811)*	EN	11
R: AT BE CH DE ES FR GB IT LI LU NL SE					
AU 8778169	A	19880310	(198818)		
CN 87106266	A	19880629	(198928)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 260090	A	EP 1987-307885	19870907

PRIORITY APPLN. INFO: GB 1986-21578 19860908; GB  
1986-22883 19860923

AN 1988-072528 [11] WPIDS

AB EP 260090 A UPAB: 19930923

Polypeptides (I) comprising at least an antigenic portion of human hepatitis B virus surface antigen (HBsAg) or the related PreS2 protein are produced by infecting insects or insect cells with an expression **vector** comprising a recombinant baculovirus having a DNA segment coding for (I) under expressional control of a polyhydrin promoter.

Also claimed is a recombinant baculovirus having a DNA segment coding for (I), and a **transfer** plasmid capable of **replicating** in a bacterium and adapted for recombining with a baculovirus having DNA coding for (I).

ADVANTAGE - (I) are readily produced by the infected insect cell (cf. **prokaryotic cells**).  
0/5

L6 ANSWER 40 OF 43 MEDLINE on STN DUPLICATE 5  
ACCESSION NUMBER: 84119495 MEDLINE  
DOCUMENT NUMBER: PubMed ID: 6582497  
TITLE: Microinjected pBR322 stimulates cellular DNA synthesis in Swiss 3T3 cells.  
AUTHOR: Hyland J K; Hirschhorn R R; Avignolo C; Mercer W E; Ohta M; Galanti N; Jonak G J; Baserga R  
CONTRACT NUMBER: CA 25898 (NCI)  
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1984 Jan) 81 (2) 400-4. Journal code: 7505876. ISSN: 0027-8424.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 198403  
ENTRY DATE: Entered STN: 19900319  
Last Updated on STN: 19970203  
Entered Medline: 19840323

AB When pBR322 is manually microinjected into the nuclei of quiescent Swiss 3T3 cells it stimulates the incorporation of [3H]thymidine into DNA. The evidence clearly shows that this increased incorporation that is detected by in situ autoradiography in microinjected cells represents cellular DNA synthesis and not DNA repair or plasmid **replication**. The effect is due to pBR322 and not due to impurities, mechanical perturbances due to the microinjection technique, or aspecific effects. This stimulation is striking in

Searcher : Shears 571-272-2528

Swiss 3T3 cells. Some NIH 3T3 cells show a slight stimulation, but hamster cells, derived from baby hamster kidney (BHK) cells, are not stimulated when microinjected with pBR322. The preliminary evidence seems to indicate that the integrity of the pBR322 genome is important for the stimulation of cellular DNA synthesis in quiescent Swiss 3T3 cells. These results, although of a preliminary nature, are of interest because they indicate that a **prokaryotic** genome may alter the **cell** cycle of mammalian **cells**. From a practical point of view the stimulatory effect of microinjected pBR322 on cellular **DNA** synthesis has a more immediate interest, because pBR322 is the **vector** most commonly used for molecular cloning and 3T3 cells are very frequently used for **gene transfer** experiments.

L6 ANSWER 41 OF 43 MEDLINE on STN DUPLICATE 6  
 ACCESSION NUMBER: 84209852 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 6327467  
 TITLE: New cosmid **vectors** developed for eukaryotic DNA cloning.  
 AUTHOR: Brady G; Jantzen H M; Bernard H U; Brown R; Schutz G; Hashimoto-Gotoh T  
 SOURCE: Gene, (1984 Feb) 27 (2) 223-32.  
 Journal code: 7706761. ISSN: 0378-1119.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 198407  
 ENTRY DATE: Entered STN: 19900320  
 Last Updated on STN: 19900320  
 Entered Medline: 19840702

AB A series of ColeI and pSC101 cosmid **vectors** have been constructed suitable for cloning large stretches of DNA. All contain a single BamHI site allowing cloning of Sau3A, MboI, BglII, BclI, and BamHI-generated fragments. These **vectors** have the following characteristics: (i) they are relatively small (1.7-3.4 kb); (ii) the BamHI cloning site is flanked by restriction enzyme sites enabling direct cloning of unfractionated insert DNA without generating multiple insert or **vector** ligation products [Ish - Horowitz and Burke, Nucl. Acids Res. 9 (1981) 2989-2998]; (iii) two **vectors** (pHSG272 and pHSG274) contain a hybrid Tn5 KmR/G418R **gene** which is selectable in both **prokaryotic** and eukaryotic **cells**, making them suitable for **transferring DNA** into eukaryotic **cells**, and (iv) the different **prokaryotic** selectable markers available in the other **vectors** described facilitate cosmid rescue of the **transferred DNA** sequences from the eukaryotic **cell**: CmR, ApR, KmR, (pHSG429), CmR, (pHSG439), colicin E1 immunity (pHSG250), (v) the cosmid pHSG272 was used successfully to construct a shuttle **vector** based on the BPVI **replicon** [Matthias et al., EMBO J. 2 (1983) 1487-1492].

L6 ANSWER 42 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1983-00546K [01] WPIDS  
 CROSS REFERENCE: 1985-088971 [15]; 1988-077380 [11]  
 DOC. NO. CPI: C1983-000532  
 TITLE: Recombinant DNA cloning **vectors** - useful in transformations of host cells for high yield polypeptide production.

DERWENT CLASS: B04 D16  
 INVENTOR(S): RAO, R N; SANTERRE, R F  
 PATENT ASSIGNEE(S): (NOVS) NOVARTIS AG; (ELIL) LILLY & CO ELI  
 COUNTRY COUNT: 17  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2100738	A	19830106	(198301)*		28
EP 68740	A	19830105	(198303)	EN	
R: BE CH DE FR GB IT LI LU NL SE					
JP 58013598	A	19830126	(198310)		
DK 8202709	A	19830411	(198321)		
HU 31304	T	19840428	(198424)		
GB 2100738	B	19851016	(198542)		
CA 1195626	A	19851022	(198547)		
AU 8657980	A	19861016	(198648)		
SU 1250174	A	19860807	(198714)		
EP 68740	B	19890322	(198912)	EN	
R: BE CH DE FR GB IT LI LU NL SE					
DE 3279566	G	19890427	(198918)		
IL 66065	A	19890630	(198931)		
IL 77488	A	19890630	(198931)		
DK 172716	B	19990614	(199930)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2100738	A	GB 1982-17561	19820617
EP 68740	A	EP 1982-303155	19820617
SU 1250174	A	SU 1982-3452106	19820616
DK 172716	B	DK 1982-2709	19820616

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DK 172716	B Previous Publ.	DK 8202709

PRIORITY APPLN. INFO: US 1982-362215 19820326; US  
 1981-276445 19810622

AN 1983-00546K [01] WPIDS  
 CR 1985-088971 [15]; 1988-077380 [11]  
 AB GB 2100738 A UPAB: 19990802

Recombinant **DNA** new cloning **vector** comprises (a) a eukaryotic promoter; (b) 1 or 2 different structural **genes** and associated control sequence that convey resistance to antibiotics, hygromycin B and/or G418, when **transferred** into a host **cell** that is sensitive to the antibiotic(s) for which resistance is conveyed. The host **cell** is susceptible to transformation, **cell** division and culture; and (c) a proaryotic **replicon**, which is functional when the host **cell** is **prokaryotic**. Provided that (1) the **gene(s)** and associated control sequence are adjacent to and, in a eukaryotic host **cell**, transcribed from the eukaryotic promoter, (2) a single **gene** and associated control sequence conveys resistance to hygromycin B or G418 but not both and (3) the **gene** conveying resistance to G418 does not code for

phosphotransferase.

Transformed host cell comprising a cloning **vector** as defined above is new. Cultivation of the cell gives a post translationally modified polypeptide.

Restriction fragment selected from 7.5 kb Bgl II restriction fragment of plasmid pKC 203; the 2.75 kb BglII/Sal I restriction fragment of plasmid pKC 203; the 1.51 kb SacI/Bgl II restriction fragment of plasmid pKC 222; and the 1.65 kb EcoRI/ Sal I restriction fragment of plasmid pKC 222 are new.

Cloned DNA sequences lacking a selective function in eukaryotic and **prokaryotic cells** can be manipulated, identified and stabilised by using the **vectors**. Production of polypeptides from transformed host **cells** is enhanced, and higher yields can be achieved.

ABEQ EP 68740 B UPAB: 19930925

Plasmid pKC222 which contains the -2.75 kB Sa/I/Bg/II restriction fragment of plasmid pKC203 as obtainable from E. coli JR225 ATCC 31912 ligated to the Sa/I/Bg/II restriction fragment of plasmid pKC7, and which confers resistance to antibiotics ampicillin, hygromycin B and G418 when transformed into an E. coli cell.

ABEQ GB 2100738 B UPAB: 19930925

Recombinant **DNA** new cloning **vector** comprises (a) a eukaryotic promoter; (b) 1 or 2 different structural **genes** and associated control sequence that convey resistance to antibiotics, hygromycin B and/or G418, when **transferred** into a host **cell** that is sensitive to the antibiotic(s) for which resistance is conveyed. The host **cell** is susceptible to transformation, **cell** division and culture; and (c) a prokaryotic **replicon**, which is functional when the host **cell** is **prokaryotic**. Provided that (1) the **gene(s)** and associated control sequence are adjacent to and, in a eukaryotic host **cell**, transcribed from the eukaryotic promoter, (2) a single **gene** and associated control sequence conveys resistance to hygromycin B or G418 but not both and (3) the **gene** conveying resistance to G418 does not code for phosphotransferase.

Transformed host cell comprising a cloning **vector** as defined above is new. Cultivation of the cell gives a post translationally modified polypeptide.

Restriction fragment selected from 7.5 kb Bgl II restriction fragment of plasmid pKC 203; the 2.75 kb BglII/Sal I restriction fragment of plasmid pKC 203; the 1.51 kb SacI/Bgl II restriction fragment of plasmid pKC 222; and the 1.65 kb EcoRI/ Sal I restriction fragment of plasmid pKC 222 are new.

Cloned DNA sequences lacking a selective function in eukaryotic and **prokaryotic cells** can be manipulated, identified and stabilised by using the **vectors**. Prodn. of polypeptides from transformed host **cells** is enhanced, and higher yields can be achieved.

L6 ANSWER 43 OF 43 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 1982-07304J [50] WPIDS  
 TITLE: Hybrid **vector** containing mitochondrial DNA segment with **replication** point - for transformation and **replication** of nuclear cytoplasmic DNA in host cells.  
 DERWENT CLASS: B04 D16  
 INVENTOR(S): ESSER, K; KUECK, U; STAHL, U; TUDZYNSKI, P  
 PATENT ASSIGNEE(S): (FARH) HOECHST AG

COUNTRY COUNT: 20  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 66249	A	19821208	(198250)*	GE	17
R: AT BE CH DE FR GB IT LI LU NL SE					
JP 57209299	A	19821222	(198306)		
DE 3121815	A	19830224	(198309)		
FI 8201921	A	19830131	(198311)		
ZA 8203820	A	19830211	(198318)		
DK 8202464	A	19830328	(198319)		
ES 8307893	A	19831101	(198406)		
HU 30262	T	19840328	(198420)		
US 4492758	A	19850108	(198504)		
CA 1197201	A	19851126	(198601)		
IL 65938	A	19851231	(198606)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4492758	A	US 1982-383205	19820528

PRIORITY APPLN. INFO: DE 1981-3121815 19810602

AN 1982-07304J [50] WPIDS

AB EP 66249 A UPAB: 19930915

A hybrid rector (I) containing a segment of a nitro-chondral DNA with a **replication** point is new. (I) can be used for the transformation of a **procaryotic** or eukaryotic host **cell**. DNA can be placed in a suitable host **cell** such as Podospora by a process which overcomes previous disadvantages such as eventual loss of the transmitted genetic information offer only a few generations in the bacteria population.

Pref. (I) contains a segment from a procaryotic plasmid, especially from a bacterial plasmid. Pref. (I) contains a portion with the **replication** point which is derived from mitochondrial DNA from Podospora or Auremonium by application of a restriction enzyme.

ABEQ US 4492758 A UPAB: 19930915

A hybrid **vector** is synthesised from a fragment of mitochondrial DNA of Acremonium or Podospora species and contain a mitochondrial DNA origin of **replication** and pref. a prokaryotic plasmid, esp. a segment of a bacterial plasmid. The hybrid **vector** is obtd. by using the pl-DNA found in fungus Podospora and is encountered in ageing mycelia of this fungus and shows a number of similarities to bacterial plasmids usually used for genetic engineering. The hybrid **vector** can be synthesised from a pl-DNA molecule of this type and a bacterial plasmid, e.g. pBR. The hybrid **vector** can be cloned in E.coli as well as Podospora, esp. using Podospora strains no longer showing senescence.

ADVANTAGE - **Vectors** can be used for the **transfer** of **prokaryotic DNA** as well as for the **transfer** of **eukaryotic DNA** to a suitable host **cell**; the difficult and laborious method using animal host **cells** and viruses as **vectors** is successfully superceded.

FILE 'MEDLINE' ENTERED AT 16:35:26 ON 31 AUG 2005

FILE LAST UPDATED: 30 AUG 2005 (20050830/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L7 1306 SEA FILE=MEDLINE ABB=ON PLU=ON "PROKARYOTIC CELLS"/CT  
 L8 12849 SEA FILE=MEDLINE ABB=ON PLU=ON "GENE TRANSFER TECHNIQUES"  
 /CT  
 L9 3 SEA FILE=MEDLINE ABB=ON PLU=ON L7 AND L8

L8 12849 SEA FILE=MEDLINE ABB=ON PLU=ON "GENE TRANSFER TECHNIQUES".  
 /CT  
 L10 1843 SEA FILE=MEDLINE ABB=ON PLU=ON REPLICON/CT  
 L11 19 SEA FILE=MEDLINE ABB=ON PLU=ON L8 AND L10

L12 22 L9 OR L11

L12 ANSWER 1 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2005275205 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 15917116  
 TITLE: Packaging the replicon RNA of the Far-Eastern subtype  
 of tick-borne encephalitis virus into single-round  
 infectious particles: development of a heterologous  
 gene delivery system.  
 AUTHOR: Yoshii Kentarou; Hayasaka Daisuke; Goto Akiko; Kawakami  
 Kazue; Kariwa Hiroaki; Takashima Ikuo  
 CORPORATE SOURCE: Laboratory of Public Health, Department of  
 Environmental Veterinary Sciences, Graduate School of  
 Veterinary Medicine, Hokkaido University, Kita-18  
 Nishi-9, Kita-ku, Sapporo, Hokkaido 060-0818, Japan.  
 SOURCE: Vaccine, (2005 Jun 10) 23 (30) 3946-56. Electronic  
 Publication: 2005-03-25.  
 Journal code: 8406899. ISSN: 0264-410X.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200507  
 ENTRY DATE: Entered STN: 20050527  
 Last Updated on STN: 20050728  
 Entered Medline: 20050727  
 ED Entered STN: 20050527  
 Last Updated on STN: 20050728

Entered Medline: 20050727

AB The sub-genomic replicon of tick-borne encephalitis (TBE) virus (Far-Eastern subtype) was packaged into infectious particles by providing the viral structural proteins in trans. Sequential transfection of TBE replicon RNA and a plasmid that expressed the structural proteins led to the secretion of infectious particles that contained TBE replicon RNA. The secreted particles had single-round infectivity, which was inhibited by TBE virus-neutralizing antibody. The physical structure of the particles was almost identical to that of infectious virions, and the packaged replicon RNA showed no recombination with the mRNAs of the viral structural proteins. Furthermore, heterologous genes were successfully delivered and expressed by packaging TBE replicon RNA with inserted GFP and Neo genes. This replicon packaging system may be a useful tool for the molecular study of the TBE virus genome packaging mechanism, and for the development of vaccine delivery systems.

L12 ANSWER 2 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2003373642 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12845329  
 TITLE: Transfection-independent production of alphavirus replicon particles based on poxvirus expression vectors.  
 AUTHOR: Vasilakis Nikos; Falvey Darlene; Gangolli Seema S; Coleman John; Kowalski Jacek; Udem Stephen A; Zamb Timothy J; Kovacs Gerald R  
 CORPORATE SOURCE: Viral Vaccine Discovery, Wyeth Vaccines Research, Pearl River, New York 10965, USA.  
 SOURCE: Nature biotechnology, (2003 Aug) 21 (8) 932-5.  
 Electronic Publication: 2003-07-06.  
 Journal code: 9604648. ISSN: 1087-0156.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200404  
 ENTRY DATE: Entered STN: 20030812  
 Last Updated on STN: 20040421  
 Entered Medline: 20040420

ED Entered STN: 20030812  
 Last Updated on STN: 20040421  
 Entered Medline: 20040420

AB This report describes a transfection-independent system for packaging alphavirus replicon vectors using modified vaccinia virus Ankara (MVA) vectors to express all of the RNA components necessary for the production of Venezuelan equine encephalitis (VEE) virus replicon particles (VRP). Infection of mammalian cells with these recombinant MVA vectors resulted in robust expression of VEE structural genes, replication of the alphavirus vector and high titers of VRP. In addition, VRP packaging was achieved in a cell type (fetal rhesus lung) that has been approved for the manufacturing of vaccines destined for human use.

L12 ANSWER 3 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2003008185 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 12496961  
 TITLE: Alphavirus-based DNA vaccine breaks immunological tolerance by activating innate antiviral pathways.  
 AUTHOR: Leitner Wolfgang W; Hwang Leroy N; deVeer Michael J;

CORPORATE SOURCE: Zhou Aimin; Silverman Robert H; Williams Bryan R G;  
Dubensky Thomas W; Ying Han; Restifo Nicholas P  
National Cancer Institute, National Institutes of  
Health, Bethesda, Maryland, USA..  
wolfgang\_leitner@nih.gov

CONTRACT NUMBER: CA44059 (NCI)

R01-AI34039 (NIAID)

SOURCE: Nature medicine, (2003 Jan) 9 (1) 33-9. Electronic  
Publication: 2002-12-23.

Journal code: 9502015. ISSN: 1078-8956.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200303

ENTRY DATE: Entered STN: 20030107

Last Updated on STN: 20030319

Entered Medline: 20030318

ED Entered STN: 20030107

Last Updated on STN: 20030319

Entered Medline: 20030318

AB Cancer vaccines targeting 'self' antigens that are expressed at  
consistently high levels by tumor cells are potentially useful in  
immunotherapy, but immunological tolerance may block their function.  
Here, we describe a novel, naked DNA vaccine encoding an alphavirus  
replicon (self-replicating mRNA) and the self/tumor antigen  
tyrosinase-related protein-1. Unlike conventional DNA vaccines, this  
vaccine can break tolerance and provide immunity to melanoma. The  
vaccine mediates production of double-stranded RNA, as evidenced by  
the autophosphorylation of dsRNA-dependent protein kinase R (PKR).  
Double-stranded RNA is critical to vaccine function because both the  
immunogenicity and the anti-tumor activity of the vaccine are blocked  
in mice deficient for the RNase L enzyme, a key component of the  
2',5'-linked oligoadenylate synthetase antiviral pathway involved in  
double-stranded RNA recognition. This study shows for the first time  
that alphaviral replicon-encoding DNA vaccines activate innate immune  
pathways known to drive antiviral immune responses, and points the way  
to strategies for improving the efficacy of immunization with naked  
DNA.

L12 ANSWER 4 OF 22 MEDLINE on STN

ACCESSION NUMBER: 2002139057 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11874633

TITLE: Cancer immunotherapy using Sindbis virus replicon  
particles encoding a VP22-antigen fusion.

AUTHOR: Cheng Wen-Fang; Hung Chien-Fu; Hsu Keng-Fu; Chai  
Chee-Yin; He Liangmei; Polo John M; Slater Leigh A;  
Ling Morris; Wu T-C

CORPORATE SOURCE: Department of Pathology, Johns Hopkins Medical  
Institutions, Baltimore, MD 21205, USA.

CONTRACT NUMBER: 5P01 34582-01 (NCI)

R01 CA 72631-01 (NCI)

U19 CA72108-02

SOURCE: Human gene therapy, (2002 Mar 1) 13 (4) 553-68.

Journal code: 9008950. ISSN: 1043-0342.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200206  
 ENTRY DATE: Entered STN: 20020305  
 Last Updated on STN: 20020606  
 Entered Medline: 20020605

ED Entered STN: 20020305

Last Updated on STN: 20020606

Entered Medline: 20020605

AB Alphavirus vectors have emerged as a strategy for the development of cancer vaccines and gene therapy applications. The availability of a new packaging cell line (PCL), which is capable of generating alphavirus replicon particles without contamination from replication-competent virus, has advanced the field of vaccine development. This replication-defective vaccine vector has potential advantages over naked nucleic acid vaccines, such as increased efficiency of gene delivery and large-scale production. We have developed a new strategy to enhance nucleic acid vaccine potency by linking VP22, a herpes simplex virus type 1 (HSV-1) tegument protein, to a model antigen. This strategy facilitated the spread of linked E7 antigen to neighboring cells. In this study, we created a recombinant Sindbis virus (SIN)-based replicon particle encoding VP22 linked to a model tumor antigen, human papillomavirus type 16 (HPV-16) E7, using a stable SIN PCL. The linkage of VP22 to E7 in these SIN replicon particles resulted in a significant increase in the number of E7-specific CD8(+) T cell precursors and a strong antitumor effect against E7-expressing tumors in vaccinated C57BL/6 mice relative to wild-type E7 SIN replicon particles. Furthermore, a head-to-head comparison of VP22-E7-containing naked DNA, naked RNA replicons, or RNA replicon particle vaccines indicated that SINrep5-VP22/E7 replicon particles generated the most potent therapeutic antitumor effect. Our results indicated that the VP22 strategy used in the context of SIN replicon particles may facilitate the generation of a highly effective vaccine for widespread immunization.

L12 ANSWER 5 OF 22 MEDLINE on STN

ACCESSION NUMBER: 2002051351 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11773416

TITLE: Heterologous gene expression from transmissible gastroenteritis virus replicon particles.

AUTHOR: Curtis Kristopher M; Yount Boyd; Baric Ralph S

CORPORATE SOURCE: Department of Microbiology and Immunology, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-7400, USA.

CONTRACT NUMBER: AI23946 (NIAID)

GM63228 (NIGMS)

SOURCE: Journal of virology, (2002 Feb) 76 (3) 1422-34.

Journal code: 0113724. ISSN: 0022-538X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200202

ENTRY DATE: Entered STN: 20020125

Last Updated on STN: 20020213

Entered Medline: 20020212

ED Entered STN: 20020125

Last Updated on STN: 20020213

Entered Medline: 20020212

AB We have recently isolated a transmissible gastroenteritis virus (TGEV) infectious construct designated TGEV 1000 (B. Yount, K. M. Curtis,

and R. S. Baric, J. Virol. 74:10600-10611, 2000). Using this construct, a recombinant TGEV was constructed that replaced open reading frame (ORF) 3A with a heterologous gene encoding green fluorescent protein (GFP). Following transfection of baby hamster kidney (BHK) cells, a recombinant TGEV (TGEV-GFP2) was isolated that replicated efficiently and expressed GFP. Replicon constructs were constructed that lacked either the ORF 3B and E genes or the ORF 3B, E, and M genes [TGEV-Rep(AvrII) and TGEV-Rep(EcoNI), respectively]. As the E and M proteins are essential for TGEV virion budding, these replicon RNAs should replicate but not result in the production of infectious virus. Following cotransfection of BHK cells with the replicon RNAs carrying gfp, GFP expression was evident by fluorescent microscopy and leader-containing transcripts carrying gfp were detected by reverse transcription-PCR (RT-PCR). Subsequent passage of cell culture supernatants onto permissive swine testicular (ST) cells did not result in the virus, GFP expression, or the presence of leader-containing subgenomic transcripts, demonstrating the single-hit nature of the TGEV replicon RNAs. To prepare a packaging system to assemble TGEV replicon particles (TGEV VRP), the TGEV E gene was cloned into a Venezuelan equine encephalitis (VEE) replicon expression vector and VEE replicon particles encoding the TGEV E protein were isolated [VEE-TGEV(E)]. BHK cells were either cotransfected with TGEV-Rep(AvrII) (E gene deletion) and VEE-TGEV(E) RNA transcripts or transfected with TGEV-Rep(AvrII) RNA transcripts and subsequently infected with VEE VRPs carrying the TGEV E gene. In both cases, GFP expression and leader-containing GFP transcripts were detected in transfected cells. Cell culture supernatants, collected approximately 36 h posttransfection, were passed onto fresh ST cells where GFP expression was evident approximately 18 h postinfection. Leader-containing GFP transcripts containing the ORF 3B and E gene deletions were detected by RT-PCR. Recombinant TGEV was not released from these cultures. Under identical conditions, TGEV-GFP2 spread throughout ST cell cultures, expressed GFP, and formed viral plaques. The development of infectious TGEV replicon particles should assist studies of TGEV replication and assembly as well as facilitate the production of novel swine candidate vaccines.

L12 ANSWER 6 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2001637163 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11693658  
 TITLE: Diplonemid glyceraldehyde-3-phosphate dehydrogenase (GAPDH) and prokaryote-to-eukaryote lateral gene transfer.  
 AUTHOR: Qian Q; Keeling P J  
 CORPORATE SOURCE: Canadian Institute for Advanced Research, Department of Botany, University of British Columbia, Vancouver, Canada.  
 SOURCE: Protist, (2001 Sep) 152 (3) 193-201.  
 Journal code: 9806488. ISSN: 1434-4610.  
 PUB. COUNTRY: Germany: Germany, Federal Republic of  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 OTHER SOURCE: GENBANK-AY033583; GENBANK-AY033584; GENBANK-AY033585; GENBANK-AY033586  
 ENTRY MONTH: 200205  
 ENTRY DATE: Entered STN: 20011107  
 Last Updated on STN: 20020508  
 Entered Medline: 20020507

ED Entered STN: 20011107  
 Last Updated on STN: 20020508  
 Entered Medline: 20020507

AB Lateral gene transfer refers to the movement of genetic information from one genome to another, and the integration of that foreign DNA into its new genetic environment. There are currently only a few well-supported cases of prokaryote-to-eukaryote transfer known that do not involve mitochondria or plastids, but it is not clear whether this reflects a lack of such transfer events, or poor sampling of diverse eukaryotes. One gene where this process is apparently active is glyceraldehyde-3-phosphate dehydrogenase (GAPDH), where lateral transfer has been implicated in the origin of euglenoid and kinetoplastid genes. We have characterised GAPDH genes from diplomonads, heterotrophic flagellates that are closely related to kinetoplastids and euglenoids. Two distinct classes of diplomonad GAPDH genes were found in diplomonads, however, neither class is closely related to any other euglenozoan GAPDH. One diplomonad GAPDH is related to the cytosolic gapC of eukaryotes, although not to either euglenoids or kinetoplastids, and the second is related to cyanobacterial and proteobacterial gap3. The bacterial gap3 gene in diplomonads provides one of the most well-supported examples of lateral gene transfer from a bacterium to a eukaryote characterised to date, and may indicate that diplomonads have acquired a novel biochemical capacity through lateral transfer.

L12 ANSWER 7 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2001636319 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11690554  
 TITLE: Improvements in gene therapy technologies.  
 AUTHOR: Kaneda Y  
 CORPORATE SOURCE: Division of Gene Therapy Science, Graduate School of Medicine, Osaka University, Suita, Osaka, Japan..  
 kaneday@gts.med.osaka-u.ac.jp  
 SOURCE: Molecular urology, (2001 Summer) 5 (2) 85-9. Ref: 29  
 Journal code: 9709255. ISSN: 1091-5362.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 (REVIEW, TUTORIAL)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200202  
 ENTRY DATE: Entered STN: 20011107  
 Last Updated on STN: 20020216  
 Entered Medline: 20020215

ED Entered STN: 20011107  
 Last Updated on STN: 20020216  
 Entered Medline: 20020215

AB We have combined hemagglutinating virus of Japan (HVJ; Sendai virus) with liposomes for efficient in vitro and in vivo fusion-mediated gene delivery. The HVJ-liposome was a highly efficient vehicle for the introduction of oligonucleotides into cells in vivo as well as for the transfer of genes <100 kbp without damaging cells. By coupling the Epstein-Barr (EB) virus replicon apparatus with HVJ-liposomes (virosomes), transgene expression was sustained in vitro and in vivo. When we added cationic lipids, the HVJ-cationic liposomes increased gene delivery 100 to 800 times in vitro compared with the conventional anionic virosomes and were also more useful for gene expression in restricted areas of organs and for gene therapy of disseminated

cancers. We further discovered that the use of anionic virosomes with a virus-mimicking lipid composition (artificial viral envelope; AVE type) increased transfection efficiency approximately 10 fold in vivo, especially in the heart, liver, kidney, and muscle. Most animal organs were found to be suitable targets for the fusigenic virosomes, and numerous gene therapy strategies using this system were successful in animals. The combination of suicide gene therapy with radiation was very effective for killing hepatomas in a mouse model. Arteriosclerosis obliterans in animal models was cured by the transfer of hepatocyte growth factor.

L12 ANSWER 8 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2001215875 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11249758  
 TITLE: Replicon-based vectors of positive strand RNA viruses.  
 AUTHOR: Khromykh A A  
 CORPORATE SOURCE: Sir Albert Sakzewski Virus Research Centre, Royal Children's Hospital, Herston, Brisbane, QLD 4029, Australia.. a.khromykh@mailbox.uq.edu.au  
 SOURCE: Current opinion in molecular therapeutics, (2000 Oct) 2 (5) 555-69. Ref: 73  
 Journal code: 100891485. ISSN: 1464-8431.  
 PUB. COUNTRY: England: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 (REVIEW, TUTORIAL)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 200104  
 ENTRY DATE: Entered STN: 20010425  
 Last Updated on STN: 20010425  
 Entered Medline: 20010419

ED Entered STN: 20010425  
 Last Updated on STN: 20010425  
 Entered Medline: 20010419

AB Vectors based on self-replicating RNAs (replicons) of positive strand RNA viruses are becoming powerful tools for gene expression in mammalian cells and for the development of novel antiviral and anticancer vaccines. A relatively small genome size and simple procedure allow rapid generation of recombinants. Cytoplasmic RNA amplification eliminates nuclear involvement and leads to extremely high levels of gene expression, and continuous synthesis of double stranded RNA results in induction of enhanced immune responses, making these vectors unique among other gene expression systems. Both cytopathic replicon vectors allowing short-term transient expression, and non-cytopathic replicon vectors allowing long-term stable expression, are now available with the choice of vector depending on particular applications.

L12 ANSWER 9 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 2001161888 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 11260400  
 TITLE: Prolonged transgene expression in glomeruli using an EBV replicon vector system combined with HVJ liposomes.  
 AUTHOR: Tsujie M; Isaka Y; Nakamura H; Kaneda Y; Imai E; Hori M  
 CORPORATE SOURCE: Department of Internal Medicine and Therapeutics (A8), and Division of Gene Therapy Science, Osaka University Graduate School of Medicine, Osaka, Japan.  
 SOURCE: Kidney international, (2001 Apr) 59 (4) 1390-6.

10/649547

Journal code: 0323470. ISSN: 0085-2538.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200106  
ENTRY DATE: Entered STN: 20010618  
Last Updated on STN: 20010618  
Entered Medline: 20010614

ED Entered STN: 20010618

Last Updated on STN: 20010618

Entered Medline: 20010614

AB BACKGROUND: Various gene transfer vectors as well as delivery systems have been developed; however, many problems remain to be solved. We already achieved a technique to introduce genes into glomerular mesangial cells by hemagglutinating virus of Japan (HVJ) liposome-mediated gene transfer via renal artery. The main limitation of this method is the transient transgene expression. METHOD: For long-term gene expression in glomeruli, Epstein-Barr virus (EBV) replicon-based plasmid was employed, containing the latent viral DNA replication origin (oriP) and EBV nuclear antigen-1 (EBNA-1), which are the minimum EBV component of transgene-nuclear retention. To examine the effect of EBV replicon apparatus on the duration of transgene expression in glomeruli in vivo, the EBV replicon vector pEBActLuc, and the control plasmid vector pActLuc were adopted. These plasmid vectors were transferred into the kidney via renal artery by using artificial viral envelope (AVE)-type HVJ liposome method, and glomerular luciferase activities were analyzed at various time points after transfection. RESULTS: On day 4, pEBActLuc and pActLuc transfer resulted in equal glomerular luciferase activity, and the luciferase gene expression was sustained for at least 56 days in glomeruli transfected with pEBActLuc, whereas it was reduced on seven days in glomeruli transfected with pActLuc. CONCLUSION: The combination of EBV replicon apparatus and HVJ liposomes appears to be a powerful tool for long-term gene expression in vivo, and furthermore, it may be a promising new therapeutic method for the progression of renal disease.

L12 ANSWER 10 OF 22 MEDLINE on STN

ACCESSION NUMBER: 2001105671 MEDLINE

DOCUMENT NUMBER: PubMed ID: 11099943

TITLE: Poliovirus replicons for targeting the CNS.

AUTHOR: Dorrell S

SOURCE: Molecular medicine today, (2000 Dec) 6 (12) 454-5.  
Journal code: 9508560. ISSN: 1357-4310.

PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: News Announcement

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200102

ENTRY DATE: Entered STN: 20010322

Last Updated on STN: 20010322

Entered Medline: 20010208

ED Entered STN: 20010322

Last Updated on STN: 20010322

Entered Medline: 20010208

L12 ANSWER 11 OF 22 MEDLINE on STN

ACCESSION NUMBER: 2000268595 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10808550

Searcher : Shears 571-272-2528

10/649547

TITLE: Evolutionary origin of eukaryotic cells.  
AUTHOR: Kostianovsky M  
CORPORATE SOURCE: Department of Pathology, Anatomy, and Cell Biology,  
Thomas Jefferson University, Philadelphia, Pennsylvania  
19107, USA.  
SOURCE: Ultrastructural pathology, (2000 Mar-Apr) 24 (2) 59-66.  
Ref: 62  
Journal code: 8002867. ISSN: 0191-3123.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals; Space Life Sciences  
ENTRY MONTH: 200006  
ENTRY DATE: Entered STN: 20000714  
Last Updated on STN: 20000714  
Entered Medline: 20000630

ED Entered STN: 20000714  
Last Updated on STN: 20000714  
Entered Medline: 20000630

AB This article reviews literature on the transition from rudimentary  
prokaryotic life to eukaryotes. An overview of the differences  
between these organisms and theories of eukaryogenesis are reviewed.  
Various methods of investigating the transformation from prokaryotes  
to eukaryotes are elaborated, including the fossil, the molecular and  
living records, and examples are given. Lastly, the recent molecular  
studies and the impact on phylogenetic classification for the tree of  
life, based on molecular evolution, are discussed.

L12 ANSWER 12 OF 22 MEDLINE on STN

ACCESSION NUMBER: 2000253278 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10792616

TITLE: Gene transfer targeting interstitial fibroblasts by the  
artificial viral envelope-type hemagglutinating virus  
of Japan liposome method.

COMMENT: Comment in: Kidney Int. 2000 May;57(5):2169-70. PubMed  
ID: 10792640

AUTHOR: Tsujie M; Isaka Y; Ando Y; Akagi Y; Kaneda Y; Ueda N;  
Imai E; Hori M

CORPORATE SOURCE: Department of Internal Medicine and Therapeutics, and  
Division of Gene Therapy Science, Osaka University  
Graduate School of Medicine, Suita, Japan.

SOURCE: Kidney international, (2000 May) 57 (5) 1973-80.  
Journal code: 0323470. ISSN: 0085-2538.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200006

ENTRY DATE: Entered STN: 20000613  
Last Updated on STN: 20000613  
Entered Medline: 20000601

ED Entered STN: 20000613  
Last Updated on STN: 20000613  
Entered Medline: 20000601

AB BACKGROUND: Tubulointerstitial inflammation and fibrosis are commonly  
associated with most human glomerular diseases. The degree of  
tubulointerstitial damage, rather than the glomerular injury, could

correlate with the degree of renal functional impairment and accurately predict long-term prognosis. In an effort to understand the pathogenesis of the progressive interstitial fibrosis, we developed a new strategy of gene transfer to the interstitial fibroblasts. METHODS: Either fluorescein isothiocyanate (FITC)-labeled oligodeoxynucleotides (ODNs) or pEBAct-NlacF expression vector was introduced into the kidney of normal rats retrogradely via ureter by using the artificial viral envelope (AVE)-type hemagglutinating virus of Japan (HVJ) liposome method. RESULTS: FITC-labeled ODNs were accumulated diffusely in the nuclei of the interstitial cells in the transfected kidney 10 minutes after transfection, and the interstitial cells were identified as interstitial fibroblasts by immunostaining with ER-TR7. To examine the gene expression in the interstitium, pEBAct-NlacF gene-conjugated HVJ liposome was injected retrogradely through the ureter, and in consequence, nuclear beta-galactosidase activity was continuously observed in interstitial cells at least two weeks after transfection. CONCLUSION: This new strategy of gene transfer to the interstitial fibroblasts is useful for the investigation of the pathophysiology of tubulointerstitial lesion, and furthermore, it may be a promising new therapeutic method for the progression of interstitial fibrosis.

L12 ANSWER 13 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 1999437779 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 10508020  
 TITLE: Propagation of TEM- and PSE-type beta-lactamases among amoxicillin-resistant *Salmonella* spp. isolated in France.  
 AUTHOR: Llanes C; Kirchgesner V; Plesiat P  
 CORPORATE SOURCE: Laboratoire de Bacteriologie, Faculte de Medecine, Universite de Franche-Comte, 25030 Besancon, France.  
 SOURCE: Antimicrobial agents and chemotherapy, (1999 Oct) 43 (10) 2430-6.  
 Journal code: 0315061. ISSN: 0066-4804.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199912  
 ENTRY DATE: Entered STN: 20000113  
 Last Updated on STN: 20000113  
 Entered Medline: 19991213  
 ED Entered STN: 20000113  
 Last Updated on STN: 20000113  
 Entered Medline: 19991213  
 AB A survey conducted between 1987 and 1994 at the University Hospital of Besancon, France, demonstrated a dramatic increase (from 0 to 42. 5%) in the prevalence of amoxicillin resistance among *Salmonella* spp. Of the 96 resistant isolates collected during this period (including 77 Typhimurium), 54 were found to produce TEM-1 beta-lactamase, 40 produced PSE-1 (equivalent to CARB-2), one produced PSE-1 plus TEM-2, and one produced OXA-1 in isoelectric focusing and DNA hybridization experiments. Plasmids coding for these beta-lactamases were further characterized by (i) profile analysis, (ii) restriction fragmentation pattern analysis, (iii) hybridization with an spvCD-orfE virulence probe, and (iv) replicon typing. In addition, isolates of *S. typhimurium* were genotypically compared by pulsed-field gel electrophoresis of XbaI-macrorestricted chromosomal DNA. Altogether, these methods showed that 40 of the 41 PSE-1 producers were actually

the progeny of a single epidemic *S. typhimurium* strain lysotype DT104. Isolates of that strain were found to harbor RepFIC virulence plasmids with somewhat different restriction profiles, but which all carried the bla(PSE-1) gene. Of these virulence/resistance plasmids, 15 were transmissible to *Escherichia coli*. TEM-1-producing *S. typhimurium* displayed much greater genotypic and plasmidic diversities, suggesting the acquisition of the bla(TEM-1) gene from multiple bacterial sources by individual strains. In agreement with this, 32 of the 35 *S. typhimurium* plasmids encoding TEM-1 were found to be conjugative. These data show that development of amoxicillin resistance among *Salmonella*, especially in serovar Typhimurium, results from both gene transfers and strain dissemination.

L12 ANSWER 14 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 1999257875 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 10326025  
 TITLE: Sustained transgene expression in vitro and in vivo using an Epstein-Barr virus replicon vector system combined with HVJ liposomes.  
 AUTHOR: Saeki Y; Wataya-Kaneda M; Tanaka K; Kaneda Y  
 CORPORATE SOURCE: Institute for Molecular and Cellular Biology, Osaka University, Japan.  
 SOURCE: Gene therapy, (1998 Aug) 5 (8) 1031-7.  
 Journal code: 9421525. ISSN: 0969-7128.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199906  
 ENTRY DATE: Entered STN: 19990614  
 Last Updated on STN: 19990614  
 Entered Medline: 19990602

ED Entered STN: 19990614  
 Last Updated on STN: 19990614  
 Entered Medline: 19990602

AB For long-term gene expression in tissues, we constructed an Epstein-Barr virus (EBV) replicon-based plasmid, pEB, containing the latent viral DNA replication origin (oriP) and EBV nuclear antigen-1 (EBNA-1). When pEB was transferred to human cells (HeLa-S3, HEK 293 and FS 3) and rodent cells (BHK-21) using HVJ-cationic liposomes, luciferase expression was observed in those cells for at least 10 days. Luciferase activity was two to 10 times higher in those cell lines on and after day 3 post-transfection of pEBActLuc compared with plasmids without the EBV replicon sequence. Southern blot analysis showed that the pEB vector luciferase gene was maintained extrachromosomally in BHK-21 cells. In human cells, transformation was five to 20 times more efficient with pEBc than with pcDNA3, and 18-35% of the introduced EBV replicon plasmid was replicated autonomously. The luciferase gene or lacZ gene was introduced into mouse liver using HVJ-AVE liposomes. Luciferase gene expression was observed for at least 35 days in cells transfected with pEBActLuc, whereas it was not detected on day 14 in cells transfected with pActLuc, which lacks the EBV sequence. By the transfer of pEBActNlacF, the lacZ gene expression rate in hepatocytes was approximately 35 and 12% on days 7 and 35, respectively.

L12 ANSWER 15 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 1998201640 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9527910

TITLE: Demonstration of the specificity of poliovirus encapsidation using a novel replicon which encodes enzymatically active firefly luciferase.

AUTHOR: Porter D C; Ansardi D C; Wang J; McPherson S; Moldoveanu Z; Morrow C D

CORPORATE SOURCE: Department of Microbiology, University of Alabama at Birmingham 35294, USA.

CONTRACT NUMBER: AI 25005 (NIAID)

AI 28147 (NIAID)

SOURCE: Virology, (1998 Mar 30) 243 (1) 1-11.  
Journal code: 0110674. ISSN: 0042-6822.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199804

ENTRY DATE: Entered STN: 19980507  
Last Updated on STN: 19980507  
Entered Medline: 19980428

ED Entered STN: 19980507

Last Updated on STN: 19980507

Entered Medline: 19980428

AB The specificity of poliovirus encapsidation has been studied using a novel chimeric genome in which the gene encoding firefly luciferase has been substituted for the VP2-VP3-VP1 genes of the poliovirus capsid (P1) gene. Transfection of RNA transcribed in vitro from this genome resulted in a VP4-luciferase fusion protein which retained luciferase enzyme activity. Since the detection of enzyme activity was dependent upon replication of the transfected RNA genome, we refer to these genomes as replicons. The replicon encoding luciferase was encapsidated upon transfection of the genomic RNA into cells previously infected with a recombinant vaccinia virus, VV-P1, which encodes the poliovirus type 1 capsid proteins (P1). Infection of cells with each serial passage, followed by analysis of luciferase enzyme activity, revealed that encapsidated replicons could be detected at the first passage with VV-P1. Amplification of the titer of encapsidated replicons occurred upon serial passage with VV-P1, as evidenced by the high expression levels of luciferase enzyme activity following infection. Serial passage of the luciferase replicons with poliovirus type 1, 2, or 3 resulted in the trans encapsidation into the type 1, 2, or 3 capsids, respectively. In contrast, serial passage with bovine enterovirus, Coxsackievirus A21 or B3, or enterovirus 70 did not result in trans encapsidation, even though co-infection of cells with the replicon and different enteroviruses resulted in high-level expression of luciferase. The results of this study highlight the specificity of poliovirus encapsidation and point to the use of encapsidated replicons encoding luciferase as a reagent for dissecting elements of replication and encapsidation.

L12 ANSWER 16 OF 22 MEDLINE on STN

ACCESSION NUMBER: 1998069462 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9406388

TITLE: Conjugative plasmids isolated from bacteria in marine environments show various degrees of homology to each other and are not closely related to well-characterized plasmids.

AUTHOR: Dahlberg C; Linberg C; Torsvik V L; Hermansson M

CORPORATE SOURCE: Lundberg Laboratory, Goteborg University, Sweden.

SOURCE: Applied and environmental microbiology, (1997 Dec) 63

(12) 4692-7.  
 Journal code: 7605801. ISSN: 0099-2240.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199802  
 ENTRY DATE: Entered STN: 19980226  
 Last Updated on STN: 19980226  
 Entered Medline: 19980213

ED Entered STN: 19980226  
 Last Updated on STN: 19980226  
 Entered Medline: 19980213

AB Mercury resistance plasmids were exogenously isolated, i.e., recovered after transfer to a model recipient bacterium, from marine air-water interface, bulk water, and biofilm communities during incubation in artificial seawater without added nutrients. Ninety-five plasmids from different environments were classified by restriction endonuclease digestion, and 12 different structural plasmid groups were revealed. The plasmid types isolated from different habitats and from different sampling occasions showed little similarity to each other based on their restriction endonuclease patterns, indicating high variation and possibly a low transfer between microhabitats and/or a different composition of the microbial communities at different sites and times. With another approach in which probes derived from one of the isolated plasmids and a mercury resistance (mer) probe from Tn501 were used, similarities between plasmids from several different groups were found. The plasmids were further tested for their incompatibility by use of the collection of inc/rep probes (B/O, com9, FI, FII, HI1, HI2, I1, L/M, N, P, Q, U, W, Y) described by Couturier et al. (M. F. Couturier, P. Bex, L. Bergquist, and W. K. Maas, Microbiol. Rev. 52:375-395, 1988). Hybridizations did not reveal any identity between the 12 plasmid groups and any of the inc/rep probes tested. The results indicate that plasmids isolated from different marine habitats have replication and/or incompatibility systems that are different from the well-characterized plasmids that are commonly used in plasmid biology. This shows the need for the use of more relevant plasmids in studies of plasmid activity in the environment and development of new inc/rep probes for their characterization.

L12 ANSWER 17 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 97306272 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9162115  
 TITLE: Multiple recruitment of class-I aldolase to chloroplasts and eubacterial origin of eukaryotic class-II aldolases revealed by cDNAs from *Euglena gracilis*.  
 AUTHOR: Plaumann M; Pelzer-Reith B; Martin W F; Schnarrenberger C  
 CORPORATE SOURCE: Institut fur Pflanzenphysiologie und Mikrobiologie, Freie Universitat Berlin, Konigin-Luise Strasse 12-16a, D-14195 Berlin, Germany.  
 SOURCE: Current genetics, (1997 May) 31 (5) 430-8.  
 Journal code: 8004904. ISSN: 0172-8083.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals

OTHER SOURCE: GENBANK-X89768; GENBANK-X89769  
 ENTRY MONTH: 199707  
 ENTRY DATE: Entered STN: 19970724  
 Last Updated on STN: 19980206  
 Entered Medline: 19970717

ED Entered STN: 19970724  
 Last Updated on STN: 19980206  
 Entered Medline: 19970717

AB The photosynthetic protist *Euglena gracilis* is one of few organisms known to possess both class-I and class-II fructose-1,6-bisphosphate aldolases (FBA). We have isolated cDNA clones encoding the precursor of chloroplast class-I FBA and cytosolic class-II FBA from *Euglena*. Chloroplast class-I FBA is encoded as a single subunit rather than as a polyprotein, its deduced transit peptide of 139 amino acids possesses structural motifs necessary for precursor import across *Euglena*'s three outer chloroplast membranes. Evolutionary analyses reveal that the class-I FBA of *Euglena* was recruited to the chloroplast independently from the chloroplast class-I FBA of chlorophytes and may derive from the cytosolic homologue of the secondary chlorophytic endosymbiont. Two distinct subfamilies of class-II FBA genes are shown to exist in eubacteria, which can be traced to an ancient gene duplication which occurred in the common ancestor of contemporary gram-positive and proteobacterial lineages. Subsequent duplications involving eubacterial class-II FBA genes resulted in functional specialization of the encoded products for substrates other than fructose-1,6-bisphosphate. Class-II FBA genes of *Euglena* and ascomycetes are shown to be of eubacterial origin, having been acquired via endosymbiotic gene transfer, probably from the antecedents of mitochondria. The data provide evidence for the chimaeric nature of eukaryotic genomes.

L12 ANSWER 18 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 97076981 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 9147689  
 TITLE: Dissemination of the *strA-strB* streptomycin-resistance genes among commensal and pathogenic bacteria from humans, animals, and plants.  
 AUTHOR: Sundin G W; Bender C L  
 CORPORATE SOURCE: Department of Microbiology and Immunology, University of Illinois-Chicago 60612, USA.  
 SOURCE: Molecular ecology, (1996 Feb) 5 (1) 133-43. Ref: 100  
 Journal code: 9214478. ISSN: 0962-1083.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 General Review; (REVIEW)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199705  
 ENTRY DATE: Entered STN: 19970523  
 Last Updated on STN: 19990129  
 Entered Medline: 19970512

ED Entered STN: 19970523  
 Last Updated on STN: 19990129  
 Entered Medline: 19970512

AB Gene transfer within bacterial communities has been recognized as a major contributor in the recent evolution of antibiotic resistance on a global scale. The linked *strA-strB* genes, which encode streptomycin-inactivating enzymes, are distributed worldwide and confer streptomycin resistance in at least 17 genera of gram-negative

bacteria. Nucleotide sequence analyses suggest that strA-strB have been recently disseminated. In bacterial isolates from humans and animals, strA-strB are often linked with the suIII sulfonamide-resistance gene and are encoded on broad-host-range nonconjugative plasmids. In bacterial isolates from plants, strA-strB are encoded on the Tn3-type transposon Tn5393 which is generally borne on conjugative plasmids. The wide distribution of the strA-strB genes in the environment suggests that gene transfer events between human, animal, and plant-associated bacteria have occurred. Although the usage of streptomycin in clinical medicine and animal husbandry has diminished, the persistence of strA-strB in bacterial populations implies that factors other than direct antibiotic selection are involved in maintenance of these genes.

L12 ANSWER 19 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 96418945 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 8821730  
 TITLE: Retrograde transfer of replication deficient recombinant adenovirus vector in the central nervous system for tracing studies.  
 AUTHOR: Kuo H; Ingram D K; Crystal R G; Mastrangeli A  
 CORPORATE SOURCE: Molecular Physiology and Genetics Section, NIA, NIH, Baltimore, MD 21224, USA.  
 SOURCE: Brain research, (1995 Dec 24) 705 (1-2) 31-8.  
 Journal code: 0045503. ISSN: 0006-8993.  
 PUB. COUNTRY: Netherlands  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199611  
 ENTRY DATE: Entered STN: 19961219  
 Last Updated on STN: 19961219  
 Entered Medline: 19961106  
 ED Entered STN: 19961219  
 Last Updated on STN: 19961219  
 Entered Medline: 19961106  
 AB We assessed the application of a replication deficient recombinant adenovirus vector as a retrograde tracer in neural pathway studies. The adenovirus vector, Ad. RSV betagal, containing the intracellular marker gene, beta-galactosidase, was injected directly into the laterodorsal striatum of rats. The retrograde transport of the vector from the injection site was clearly visible in the cerebral cortex, thalamic nucleus, and substantia nigra. No evidence for anterograde transport of the vector was found. When the vector was injected into the genu of the corpus callosum, little uptake of the vector by fibers was noted which suggested that uptake by fibers-of-passage should not be a problem in tracing studies. The present study demonstrates that adenoviral vectors can be useful retrograde tracers in the study of afferent connections within the central nervous system.

L12 ANSWER 20 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 95280914 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 7760811  
 TITLE: trans-dominant inhibition of poly(ADP-ribosyl)ation sensitizes cells against gamma-irradiation and N-methyl-N'-nitro-N-nitrosoguanidine but does not limit DNA replication of a polyomavirus replicon.  
 AUTHOR: Kupper J H; Muller M; Jacobson M K; Tatsumi-Miyajima J; Coyle D L; Jacobson E L; Burkle A

10/649547

CORPORATE SOURCE: Abteilung 0610, Angewandte Tumorstudiologie, Deutsches  
Krebsforschungszentrum, Heidelberg, Germany.  
SOURCE: Molecular and cellular biology, (1995 Jun) 15 (6)  
3154-63.

Journal code: 8109087. ISSN: 0270-7306.

PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199506  
ENTRY DATE: Entered STN: 19950707

Last Updated on STN: 19950707

Entered Medline: 19950628

ED Entered STN: 19950707  
Last Updated on STN: 19950707  
Entered Medline: 19950628

AB Poly(ADP-ribosyl)ation is a posttranslational modification of nuclear  
proteins catalyzed by poly(ADP-ribose) polymerase (PARP; EC 2.4.2.30),  
with NAD<sup>+</sup> serving as the substrate. PARP is strongly activated upon  
recognition of DNA strand breaks by its DNA-binding domain.  
Experiments with low-molecular-weight inhibitors of PARP have led to  
the view that PARP activity plays a role in DNA repair and possibly  
also in DNA replication, cell proliferation, and differentiation.  
Accumulating evidence for nonspecific inhibitor effects prompted us to  
develop a molecular genetic system to inhibit PARP in living cells,  
i.e., to overexpress selectively the DNA-binding domain of PARP as a  
dominant negative mutant. Here we report on a cell culture system  
which allows inducible, high-level expression of the DNA-binding  
domain. Induction of this domain leads to about 90% reduction of  
poly(ADP-ribose) accumulation after gamma-irradiation and sensitizes  
cells to the cytotoxic effect of gamma-irradiation and of  
N-methyl-N'-nitro-N-nitrosoguanidine. In contrast, induction does not  
affect normal cellular proliferation or the replication of a  
transfected polyomavirus replicon. Thus, trans-dominant inhibition of  
the poly(ADP-ribose) accumulation occurring after gamma-irradiation or  
N-methyl-N'-nitro-N-nitrosoguanidine is specifically associated with a  
disturbance of the cellular recovery from the inflicted damage.

L12 ANSWER 21 OF 22 MEDLINE on STN

ACCESSION NUMBER: 95280735 MEDLINE

DOCUMENT NUMBER: PubMed ID: 7760740

TITLE: Expression of heterologous integrin genes in cultured  
eukaryotic cells.

AUTHOR: Giancotti F G; Spinardi L; Mainiero F; Sanders R

CORPORATE SOURCE: Department of Pathology, New York University School of  
Medicine, New York 10016, USA.

SOURCE: Methods in enzymology, (1994) 245 297-316.

Journal code: 0212271. ISSN: 0076-6879.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199506

ENTRY DATE: Entered STN: 19950707

Last Updated on STN: 19950707

Entered Medline: 19950628

ED Entered STN: 19950707  
Last Updated on STN: 19950707  
Entered Medline: 19950628

Searcher : Shears 571-272-2528

L12 ANSWER 22 OF 22 MEDLINE on STN  
 ACCESSION NUMBER: 95198550 MEDLINE  
 DOCUMENT NUMBER: PubMed ID: 7891563  
 TITLE: Multiple roles for DNA polymerase I in establishment  
 and replication of the promiscuous plasmid pLS1.  
 AUTHOR: Diaz A; Lacks S A; Lopez P  
 CORPORATE SOURCE: Centro de Investigaciones Biologicas, C.S.I.C., Madrid,  
 Spain.  
 CONTRACT NUMBER: AI14885 (NIAID)  
 SOURCE: Molecular microbiology, (1994 Nov) 14 (4) 773-83.  
 Journal code: 8712028. ISSN: 0950-382X.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199504  
 ENTRY DATE: Entered STN: 19950427  
 Last Updated on STN: 19950427  
 Entered Medline: 19950417

ED Entered STN: 19950427  
 Last Updated on STN: 19950427  
 Entered Medline: 19950417

AB The polymerase activity of DNA polymerase I is important for the  
 establishment of the pLS1 replicon by reconstitutive assembly in  
 Streptococcus pneumoniae after uptake of exogenous pLS1 plasmid DNA.  
 In polA mutants lacking the polymerase domain, such establishment was  
 reduced at least 10-fold in frequency. Chromosomally facilitated  
 establishment of pLS1-based plasmids carrying DNA homologous to the  
 host chromosome was not so affected. However, both types of plasmid  
 transfer gave mostly small colonies on initial selection, which was  
 indicative of a defect in replication and filling of the plasmid pool.  
 Once established, the pLS1-based plasmids replicated in polA mutants,  
 but they showed segregational instability. This defect was not  
 observed in strains with the wild-type enzyme or in an S. pneumoniae  
 strain that encodes the polymerase and exonuclease domains of the  
 enzyme on separate fragments. The role of DNA polymerase I in stably  
 maintaining the plasmids depends on its polymerizing function in three  
 separate steps of rolling-circle replication, as indicated by the  
 accumulation of different replication intermediate forms in polA  
 mutants. Furthermore, examination of the segregational stability of  
 the pLS1 replicon in an Escherichia coli mutant system indicated that  
 both the polymerase and the 5'-to-3' exonuclease activities of DNA  
 polymerase I function in plasmid replication.

FILE 'HOME' ENTERED AT 16:37:31 ON 31 AUG 2005

10/649547

=> d his ful

(FILE 'HOME' ENTERED AT 16:30:31 ON 31 AUG 2005)  
SET COST OFF

FILE 'CAPLUS' ENTERED AT 16:32:11 ON 31 AUG 2005  
L1 47039 SEA ABB=ON PLU=ON (GENE OR DEOXYRIBONUCLEIC OR DNA OR  
DEOXY RIBONUCLEIC OR NUCLEIC) (S) (TRANSFER OR TRANSFERRED  
OR TRANSFERRING)  
L2 119 SEA ABB=ON PLU=ON (L1 OR TRANSGENET? OR TRANSGENESIS?)  
AND PRO!ARYOT?(S)CELL  
L3 38 SEA ABB=ON PLU=ON L2 AND VECTOR  
L4 10 SEA ABB=ON PLU=ON L3 AND (REPLICAT? OR REPLICON)

FILE 'CAPLUS' ENTERED AT 16:34:15 ON 31 AUG 2005  
D QUE  
D 1-10 .BEVERLY

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,  
JICST-EPLUS, JAPIO' ENTERED AT 16:34:16 ON 31 AUG 2005  
L5 52 SEA ABB=ON PLU=ON L4  
L6 43 DUP REM L5 (9 DUPLICATES REMOVED)  
D 1-43 IBIB ABS

FILE 'MEDLINE' ENTERED AT 16:35:26 ON 31 AUG 2005  
E PROKARYOTIC CELLS/CT 5  
L7 1306 SEA ABB=ON PLU=ON "PROKARYOTIC CELLS"/CT  
E GENE TRANSFER TECHNIQUES/CT 5  
L8 12849 SEA ABB=ON PLU=ON "GENE TRANSFER TECHNIQUES"/CT  
L9 3 SEA ABB=ON PLU=ON L7 AND L8  
E REPLICON/CT 5  
L10 1843 SEA ABB=ON PLU=ON REPLICON/CT  
L11 19 SEA ABB=ON PLU=ON L8 AND L10  
D QUE L9  
D QUE L11  
L12 22 SEA ABB=ON PLU=ON L9 OR L11  
D 1-22 .BEVERLYMED

FILE 'HOME' ENTERED AT 16:37:31 ON 31 AUG 2005

FILE HOME

FILE CAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Aug 2005 VOL 143 ISS 10  
FILE LAST UPDATED: 30 Aug 2005 (20050830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

Searcher : Shears 571-272-2528

10/649547

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE

FILE LAST UPDATED: 30 AUG 2005 (20050830/UP). FILE COVERS 1950 TO DA

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 August 2005 (20050825/ED)

FILE RELOADED: 19 October 2003.

FILE EMBASE

FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS

FILE LAST UPDATED: 26 AUG 2005 <20050826/UP>  
MOST RECENT DERWENT UPDATE: 200555 <200555/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,  
PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf)

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER  
GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT  
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
FIRST VIEW - FILE WPIFV.

10/649547

FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:

<http://thomsonderwent.com/support/dwpioref/reftools/classification/code>  
FOR DETAILS. <<<

FILE CONFSCI

FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE SCISEARCH

FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE JICST-EPLUS

FILE COVERS 1985 TO 22 AUG 2005 (20050822/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED  
TERM (/CT) THESAURUS RELOAD.

FILE JAPIO

FILE LAST UPDATED: 2 AUG 2005 <20050802/UP>

FILE COVERS APR 1973 TO APRIL 28, 2005

<<< GRAPHIC IMAGES AVAILABLE >>>